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Special attention is called to the following:

Change in Date of Annual Meeting.

The Next Annual Meeting of the Medical Society of New Jersey will be held in Atlantic City, on June 4th to 7th, 1904.

The District Reporters of component societies are requested to send their reports to the Chairman of the Committee on Scientific Work at least 30 days before the time of the Annual Meeting.

Reporters are reminded that their reports are published in the volume of Transactions, and should, therefore, be carefully prepared, and that names and medical terms, especially, should be distinctly written. Reports from other physicians should be incorporated in their own report. As far as possible, all papers and reports should be typewritten.

The Secretaries of the District Societies are requested to send with their list of the Officers, Annual Delegates and Active Members, in regular standing, a separate list of the delinquent members, regular practitioners not members of any component society, homeopathic, eclectic, and all irregular practitioners of medicine, with the post office addresses, to the Recording Secretary, Dr. Wm. J. Chandler, South Orange, *at least thirty days* before the Annual Meeting.

The assessment upon the component societies for the year ending June, 1904, is $1.00 for each member.

It will be necessary under the new Constitution and By-Laws for every county medical society desiring representation at the next annual meeting to take out a *new charter* and possibly to make changes in its by-laws. During the ensuing year the President and Secretary were especially authorized to grant charters to the societies applying therefor. It is recommended that the county societies apply for their charters promptly.

FELLOWS' PRIZE ESSAY.

This Prize was instituted by the Fellows of the Medical Society of New Jersey in 1881, and is open for competition to the members of the Component (County) Medical Societies.

The Fellows have chosen as the subject of the competing Essays this year, "The Etiology of Malarial Diseases." The Essays must be signed with an assumed name and have a motto, both of which shall be endorsed on a sealed envelope containing the author's name, residence and Component Society.

They should not contain less than 2000 nor more than 4000 words and must be characterized by originality in investigation and thought and by clearness and conciseness of expression, and be, in the judgment of the Committee, of decided value to the members of the Society and the profession generally. Failing in these respects no awards will be made.

The Essays, with the sealed envelope, must be placed in the hands of the Chairman of the Committee on or before the first day of May, 1904. The Committee will select the first two Essays in order of merit. To the first will be awarded the prize of one hundred dollars; to the second, that of honorary mention.

The unsuccessful authors will receive back their Essays upon their identification to the Chairman of the Committee. The successful Essays will be the property of the Society and be published in its Transactions.

E. L. B. GODFREY, M. D., *Chairman*, Camden,
DAVID C. ENGLISH, M. D., New Brunswick,
WILLIAM ELMER, M. D., Trenton,
Committee.

CAMDEN N., J., July 25, 1903.

TRANSACTIONS

OF THE

MEDICAL SOCIETY

OF

NEW JERSEY.

1903.

The L. J. Hardham Printing Co., 243 & 245 Market St., Newark, N. J.

1903.

*Benj. H. Stratton.....1838
*Jabez G. Goble.....1839
*Thomas P. Stewart.....1840
*Ferdinand S. Schenck..1841
*Zachariah Read..... 1842
*Abraham Skillman.....1843
*George R. Chetwood...1844
*Robert S. Smith.....1845
*Charles Hannah.....1846
*Jacob T. B. Skillman....1847
*Samuel H. Pennington.1848
*Joseph Fithian.....1849
*Elias J. Marsh.....1850
*John H. Phillips.....1851
*Othn'l H. Taylor.....1852
*Samuel Lilly.....1853
*A. B. Dayton.....1854
*J. B. Coleman.....1855
*Richard M. Cooper.....1856
*Thomas Ryerson.....1857
*Isaac P. Coleman.....1858
*John R. Sickler.....1859
*Wm. Elmer. 1860
*Jno. Blane.....1861
*Jno. Woolverton.....1862
*Theo. R. Varick.....1863
*Ezra M. Hunt.....1864
*Abram Coles..... 1865
*Benjamin R. Bateman...1866
Jno. C. Johnson.....1867
*Thomas J. Corson.....1868
*William Pierson 1869
*Thomas F. Cullen.....1870
*Charles Hasbrouck....1871
*Franklin Gauntt..... 1872
*T. J. Thomason.....1873
*G. H. Larison.....1874
*Wm. O'Gorman.....1875
*Jno. V. Schenck.....1876
*Henry R. Baldwin.....1877
*John S. Cook.....1878
Alex. W. Rogers.....1879
*Alex. N. Dougherty....1880
*Lewis W. Oakley..... .1881
*John W. Snowden.....1882
*Stephen Wickes.....1883
P. C. Barker.....1884
*Joseph Parrish.....1885
Charles J. Kipp.....1886
John W. Ward.....1887
H. Genet Taylor.....1888
*B. A. Watson... 1889
*Jas. S. Green..... 1890
Elias J. Marsh..... 1891
George T. Welch.....1892
John G. Ryerson..... 1893
O. H. Sproul.....1894
William Elmer.....1895
T. J. Smith..... 1896
David C. English..... 1897
C. R. P. Fisher.....1898
Luther M. Halsey.....1899
*William Pierson.....1900
J. D. McGill..... 1901
E. L. B. Godfrey.....1902

HONORARY MEMBERS.

*DAVID HOSACK, New York.....1827
*J. W. FRANCIS.....1827
*JOHN CONDICT, Orange.....1830
*USHER PARSONS, Rhode Island.....1839
*REUBEN D. MURPHY, Cincinnati.....1839
*ALBAN G. SMITH, New York.....1839
*WILLARD PARKER, New York.....1842
*VALENTINE MOTT, New York.....1843
*JONATHAN KNIGHT, New Haven.....1848
*NATHANIEL CHAPMAN, Philadelphia.....1848
*ALEXANDER H. STEPHENS, New York.....1848
*JOHN C. WARREN, Boston.....1849
*LEWIS C. BECK, New York.....1850
*JOHN C. TORREY, New York.....1850
*GEORGE B. WOOD, Philadelphia.....1853
*H. A. BUTTOLPH, Short Hills, N. J.....1854
*ASHBEL WOODWARD, Franklin, Conn.....1861
*THOMAS W. BLATCHFORD, Troy, N. Y.....1886
*JEREMIAH S. ENGLISH, Manalapan, N. J.....1867
*STEPHEN WICKES, Orange, N. J.....1868
*S. O. VANDERPOOL, Albany, N. Y.....1872
*JOSEPH PARRISH, Burlington, N. J.....1872
*FERRIS JACOBS, Delhi, N. Y.....1872
C. A. LINDSLEY, New Haven, Conn.....1872
*WM. PEPPER, Philadelphia.....1874
S. WIER MITCHELL, Philadelphia.....1876
CYRUS F. BRACKETT, Princeton, N. J.....1880
*JOSEPH C. HUTCHINSON, Brooklyn, N. Y.....1880
THOMAS ADDIS EMMETT, New York.....1884
*ISAAC E. TAYLOR, New York.....1884
*D. HAYES AGNEW, Philadelphia.....1886
*JOS. LEIDY, Philadelphia.....1886
FREDERICK S. DENNIS, New York.....1893

*JOHN H. RIPLEY, New York.....1893
VIRGIL P. GIBNEY, New York.....1893
*WILLIAM PIERSON, Orange, N. J.....1894
ABRAM JACOBI, New York.....1896
VIRGIL M. D. MARCY, Cape May City.....1896
*SAMUEL H. PENNINGTON, Newark, N. J.....1897
ALFRED A. WOODHULL, Princeton, N. J.....1901
J. LEONARD CORNING, New York.....1902
JOHN ALLAN WYETH, New York.....1903
WILLIAM K. VAN REYPEN, U. S. N.....1903
LAWRENCE F. FLICK, Philadelphia, Pa.....1903

PERMANENT DELEGATES.

ATLANTIC—B. C. PENNINGTON, Atlantic City.....1900
W. B. STEWART, Atlantic City.....1900
E. A. REILLY, Atlantic City 1903
W. E. DARNALL, Atlantic City.....1903
J. ADDISON JOY, Atlantic City.....1903
BERGEN—HENRY C. NEER, Park Ridge..... 1892
DANIEL A. CURRIE, Englewood.....1899
DAVID ST. JOHN, Hackensack.... 1900
SAMUEL E. ARMSTRONG, Rutherford.....1901
BURLINGTON—J. HOWARD PUGH, Burlington.....1892
ENOCH HOLLINGSHEAD, Pemberton..... ...1903
R. H. PARSONS, Mount Holly..... ...1903
CAMDEN—DUNCAN W. BLAKE, Gloucester..... 1895
ONAN B. GROSS, Camden..... 1895
WILLIAM H. IRELAND, Camden..... 1895
DANIEL STROCK, Camden..... ... .1899
WILLIAM H. ISZARD, Camden.....1899
WILLIAM A. DAVIS, Camden..... 1900
ALEXANDER MCALISTER, Camden.....1903
WILLIAM S. JONES, Camden..... 1903
HARRY H. SHERK, Camden.....1903
CAPE MAY—RANDOLPH MARSHALL, Tuckahoe.....1903
CUMBERLAND—S. T. DAY, Port Norris..... ...1899
M. K. ELMER, Bridgeton 1900
T. J. SMITH, Bridgeton.....1900
O. H. ADAMS, Vineland.....1900
JOSEPH TOMLINSON, Bridgeton 1902
W. L. NEWELL, Millville.....1903
J. C. APPLEGATE, Bridgeton..... ...1902
ESSEX—CHARLES YOUNG, Newark.....1892
JOSEPH C. YOUNG, Newark..... 1892
HERMAN C. BLEYLE, Newark..... 1896
WILLIAM J. CHANDLER, South Orange.....1896
EDWARD J. ILL, Newark 1896
GEORGE R. KENT, Newark..... 1896
DANIEL M. SKINNER, Belleville..... 1896
CHARLES H. BAILEY, Bloomfield.....1898

ESSEX—THOMAS S. FITCH, Orange.....1898
RICHARD C. NEWTON, Montclair.....1898
WILLIAM RANKIN, Newark.....1898
JOSHUA W. READ, Newark 1898
GEORGE A. VAN WAGENEN, Newark.....1898
JAMES T. WRIGHTSON, Newark.....1898
PETER V. P. HEWLETT, Newark.....1900
THERON Y. SUTPHEN, Newark 1900
CHARLES F. UNDERWOOD, Newark.....1900
L. EUGENE HOLLISTER, Newark.....1900
CHARLES D. BENNETT, Newark.....1900
HENRY B. WHITEHORNE, Verona.....1900
WILLIAM B. GRAVES, East Orange.....1900
ROBERT G. STANWOOD, Newark.....1900
THOMAS W. HARVEY, Orange.....1901
AARON K. BALDWIN, Newark.....1902
JOHN H. BRADSHAW, Orange.....1903
DAVID E. ENGLISH, Millburn.....1903
GEORGE B. PHILHOWER, Nutley.....1903
RICHARD P. FRANCIS, Montclair.....1903
HENRY L. COIT, Newark.....1903
THEODORE W. CORWIN, Newark.....1903
RICHARD G. P. DIEFFENBACH, Newark.....1903
EDWARD STAEHLIN, Newark.....1903
LIVINGSTON S. HINCKLEY, Newark.....1903
GLOUCESTER—GEORGE E. READING, Woodbury.....1893
GEORGE C. LAWS, Paulsboro.....1895
JAMES HUNTER, JR., Westville.....1898
EUGENE T. OLIPHANT, Bridgeport.....1903
HUDSON—ROMEO F. CHABERT, Hoboken.....1892
J. A. EXTON, Arlington.....1898
JOS. M. RECTOR, Jersey City.....1900
FREDERICK M. CORWIN, Bayonne.....1900
GEO. E. MCLAUGHLIN, Jersey City 1900
MORTIMER LAMPSON, Jersey City.....1900
T. R. CHAMBERS, Jersey City.....1900
HUNTERDON—ISAAC S. CRAMER, Flemington.....1892
W. S. CREVELING, Valley.....1896
GEORGE N. BEST, Rosemont.....1902
MERCER—CORNELIUS SHEPHERD, Trenton.....1892
R. R. ROGERS, SR., Trenton.....1895
DAVID WARMAN, Trenton.....1897
ELMER BARWIS, Trenton.....1898

MERCER—THOS. H. MACKENZIE, Trenton.....1900
C. F. ADAMS, Trenton 1900
J. C. FELTY, Trenton.....1900
HENRY B. COSTILL, Trenton.....1902
GEORGE H. FRANKLIN, Hightstown. 1903
MIDDLESEX—EDWARD B. DANA, Metuchen. 1898
AMBROSE TREGANOWAN, South Amboy 1898
F. M. DONAHUE, New Brunswick 1900
J. G. WILSON, Perth Amboy.....1901
DAVID STEPHENS, New Brunswick.....1903
MONMOUTH—HENRY MITCHELL, Asbury Park..... 1892
D. MCLEAN FORMAN, Freehold.....1901
EDWIN FIELD, Red Bank.....1901
P. B. PUMYEA, Allentown 1901
GEORGE F. WILBUR, Asbury Park.....1901
F. C. PRICE. Imlaystown..... 1901
SAMUEL JOHNSON, Asbury Park.....1901
CYRUS KNECHT, Matawan..... ..1902
MORRIS—I. W. CONDICT, Dover..... 1892
LEVI FARROW, Middle Valley..... 1895
CUTHBERT WIGG, Boonton.....1899
JAMES DOUGLASS, Morristown. 1901
STEPHEN PIERSON, Morristown..... ... .1901
F. W. FLAGGE, Rockaway.....1901
CALVIN ANDERSON, Madison 1901
BRITTON D. EVANS, Morris Plains..... 1902
A. A. LEWIS, Morristown.....1903
PASSAIC—W. B. JOHNSON, Paterson..... 1892
P. A. HARRIS, Paterson.....1893
GEORGE H. BALLERAY, Paterson.....1896
JOHN L. LEAL, Paterson. 1899
C. H. SCRIBNER, Paterson.... 1900
ROBT. M. CURTS, Paterson..... 1900
JAMES M. STEWART, Paterson..... 1900
JOHN T. GILLSON, Paterson..... 1900
MATTHEW A. MACKINTOSH, Paterson..... 1900
ANDREW F. MCBRIDE, Paterson.... 1902
SALEM—B. A. WADDINGTON, Salem.....1893
W. H. JAMES, Pennsville..... 1900
HENRY CHAVANNE, Salem..... 1900
SOMERSET—S. O. B. TAYLOR, Millstone.....1897
J. P. HECHT, Raritan..... 1898
A. L. STILLWELL, Somerville.....1900

SOMERSET—MARY E. GASTON, Somerville.....1902
SUSSEX—E. MORRISON, Newton.....1903
B. W. FERGUSON, Beemerville.....1899
H. D. VAN GAASBECK, Sussex.....1903
UNION—ALONZO PETTIT, Elizabeth.....1893
E. B. SILVERS, Rahway.....1893
J. ACKERMAN COLES, Scotch Plains.....1896
T. H. TOMLINSON, Plainfield.....1896
JAMES S. GREEN, Elizabeth.....1900
N. L. WILSON, Elizabeth.....1900
W. U. SELOVER, Rahway.....1900
T. N. MCLEAN, Elizabeth.....1903
WARREN—J. M. REESE, Philipsburg.....1902
G. W. CUMMINS, Belvidere.....1903

Members of District Medical Societies

REPRESENTED AT THE

ANNUAL MEETING, 1903.

ATLANTIC COUNTY.

District Society organized June 7, 1880. Annual meeting first week in February.

Theo. Senseman, *Pres.*,
Cor. St. Charles and Pacific, Atlantic City

E. H. Madden, *V.-Pres.*,
Absecon

Edward Guion, *Sec. & Treas.*,
1408 Atlantic Ave., Atlantic City

A. B. Shimer, *Rep.*,
606 Pacific Ave., Atlantic City

W. M. Barnes,
Le Grand Apartments, "

E. C. Chew,
285 Kentucky Ave., "

A. D. Cuskaden,
2000 Atlantic Ave., "

W. P. Conaway,
1723 Pacific Ave., "

Wm. E. Darnall,
1704 Pacific Ave., "

J. F. De Silver,
1209 Pacific Ave., "

T. G. Dunlap,
921 Pacific Ave., "

J. U. Elmer,
Egg Harbor City

W. B. Fayerman,
29 N. Ohio Ave., Atlantic City

C. E. Filbert,
Cor. Atlantic and Morris Aves., "

C. M. Fish,
Pleasantville

M. F. Frank,
Egg Harbor City

J. H. Frick,
Cor. Mass. and Madison Aves., Atlantic City

C. Garrabrant,
1001 Atlantic Ave., Atlantic City

G. P. Gehring,
Bakersville

J. J. Harward,
19 State Ave., Atlantic City

E. H. Harvey,
30 N. Florida Ave., "

W. M. Hodges,
"

E. E. Howard,
Somers Point

H. C. James,
May's Landing

J. Addison Joy,
1920 Pacific Ave., Atlantic City

D. A. Kraker,
1719 Pacific Ave., "

Emery Marvel,
811 Pacific Ave., "

Philip Marvel,
1616 Pacific Ave., "

J. C. Marshall,
1517 Pacific Ave., "

V. W. Metzler,
1616 Pacific Ave., "

H. D. Nichols,
"

James North,
29 So. Tennessee Ave., "

B. C. Pennington,
1212 Pacific Ave., "

W. M. Pollard,
25 So. South Carolina Ave., "

W. M. Powell,
31 So. Indiana Ave., "

Eugene L. Reed,
Cor. Pacific and Virginia Aves., "

Thos. K. Reed,
22 N. Pacific Aves., "

Talbot Reed,
"

Edward A. Reiley, 20 So. Tennessee Ave., Alantic City
Walter E. Reynolds, 27 So. Indiana Ave., "
E. S. Sharpe, 34 N. Georgia Ave., "
L. R. Souder, 1910 Pacific Ave., "
J. W. Snowball, 1519 Pacific Av., "
W. B. Stewart, Cor. Pacific and N. C. Aves., Atlantic City
M. L. Somers, 2012 Pacific Ave., "
J. B. Thompson, Hotel Chelsea, "
J. Bart Webster, 132 So. Maryland Ave., "

No. members, 47.

BERGEN COUNTY.

District Society reorganized February 28, 1854. Annual meeting second Tnesday in April.

J. E. Pratt, *Pres.*, *Schraalenburgh*
Wm. L. Vroom, *V.-Pres.*, *Ridgewood*
Daniel A Currie, *Sec'y*, *Englewood*
David St. John, *Treas.*, *Hackensack*
J. W. Proctor, *Rep.*, *Englewood*
Sam'l E. Armstrong, *Rutherford*
M. S. Ayres, *Fairview*
H. M. Banks *Englewood*
J. F. Bell, "
F. C. Bradner, "
Chas. D. Brooks, *Hackensack*
M. Blinckston, *Westwood*
Chas. Calhoun, *Rutherford*
E. E. Conover, *Hasbrouck Heights*
Edgar K. Conrad, *Hackensack*
J. F. Demund, *Ridgewood*
H. C. Elsing, *Ridgefield Park*
Geo. Bancroft Gale, *Rutherford*
T. N. Gregory, *Englewood*
John J. Haring, *Tenafly*
C. W. Harreys, *Ridgewood*
Fred. F. Hallett, *Hackensack*
Joseph Huger, *Fort Lee*
J. B. W. Lansing, *Tenafly*
Howard McFadden, *Hackensack*
J. A. Moeing, *Park Ridge*
H. C. Neer, "
L. B. Parsell, *Closter*
B. D. Stone, *Westwood*
A. A. Swayze, *Hackensack*
J. W. Terry, *Englewood*
Theo. E. Townsend, *Westwood*
Byron G. Van Horne, *Englewood*
Carrie H. Van Horn, *Englewood*
J. Talmage Wyckoff, *Leonia*
F. H. White, *Hackensack*
Max Wyler, *Fort Lee*
Samuel J. Zabriskie, "

No members, 38.

BURLINGTON COUNTY.

Society organized May 19, 1829. Meets third Tuesday in January, April, June and October. Annual meeting third Tuesday in April.

John B. Cassaday, *Pres.*, *Burlington*
J. Clifford Haines, *V.-Pres.*, *Vincentown*
Addison W. Taylor, *Sec'y*, *Beverly*
Enoch Hollingshead, *Treas.*, *Pemberton*

Joseph Stokes, *Rep.*, *Moorestown*
J. H. Pugh, *Censor*, *Burlington*
W. C. Parry, *Censor*, *Hainesport*
Alex. Marcy, Jr., *Censor*, *Riverton*
W. H. Shipps, *Hist.*, *Bordentown*
David Baird, Jr., *Florence*
J. E. Dubell, *Columbus*
Florence A. Dyer, *Riverton*
John J. Flynn, *Mount Holly*
F. A. Gauntt, *Burlington*
A. L. Gordon, "
Walter E. Hall, "
Jacob R. Haines, *Mount Holly*
Willett P. Haines, *Medford*
G. Eugene A. Harbet, *Pemberton*
I. W. Hollingshead, *123 S. 18th St.*, *Philadelphia*
J. D. Janney, *Cinnaminson*
Wm. P. Melcher, *Mount Holly*
C. D. Mendenhall, *Bordentown*
Emma P. Weeks Metzer, *Riverside*
R. H. Parsons, *Mount Holly*
Elmer D. Prickett, *Mount Holly*
Lewis L. Sharp, *Medford*
A. H. Small, *Riverside*
F. S. J. Stoddart, *Reydal, Pa.*
N. N. Stokes, *Moorestown*
F. G. Stroud, "
George H. Wilkinson, *Moorestown*
J. B. Winterstein, "
Irene D. Young, *Bordentown*

CONTRIBUTING MEMBER.

William Martin, *Bristol, Pa.*

HONORARY MEMBERS.

Charles P. Noble, *1509 Locust St.*, *Philadelphia, Pa.*
Chas. H. Thomas, *1509 Locust St.*, *Philadelphia, Pa.*
E. P. Townsend, *Billings, Mont.*
T. T. Price, *Tuckerton*

No. members, 34.

CAMDEN COUNTY.

Organized August 14, 1846. Annual meeting second Tuesday in May.

Joseph H. Wills, *Pres.*, 102 Cooper, Camden
John W. Marcy, *V.-Pres.*, Merchantville
Paul M. Mecray, *Sec'y*, 405 Cooper, Camden
Joel W. Fithian, *Treas.*, 608 Broadway, "
Alfred Cramer, *Hist.*, 433 Penn, "
Walter S. Bray, *Rep.*, 2d and York, "
Henry H. Sherk, 2647 Westfield ave, "
Joseph S. Baer, 565 Stevens, "
Wilson G. Bailey, Broadway and Pine, Camden
Philip W. Beale, 9th and Federal, "
Dowling Benjamin, 215 Cooper, "
John K. Bennett, Gloucester
Duncan W. Blake, "
Charles S. Braddock, Haddonfield
Nelson M. Brinkerhoff, 6th and State, Camden
Sylvan G. Bushey, 7th and Pine, "

Robert Casperson,
215 N. 3d, Camden

William A. Davis,
3d and Cooper, "

Clarence B. Donges,
525 Broadway, "

John W. Donges,
525 Broadway, "

John G. Doron,
207 N. 6th, "

Alfred M. Elwell,
330 Cooper, "

E. L. B. Godfrey,
400 Linden, "

Onan B. Gross,
700 Market, "

Wm. J. Halbeison,
931 Broadway, "

John J. Haley,
Gloucester

Levi B. Hirst,
586 Federal, Camden

Conrad G. Hoell,
565 Benson, "

Frank L. Horning,
623 Market, "

J. Edgar Howard,
Haddonfield

Joseph E. Hurff,
Blackwood

William H. Ireland,
330 Cooper, Camden

William H. Iszard,
411 N. 4th, "

Harry Jarrett,
Broadway and Cherry, "

William B. Jennings,
Haddonfield

William S. Jones,
3d and Penn, Camden

Wm. W. Kain,
5th and Pine, "

William I. Kelchner,
942 Cooper, "

Grant E. Kirk,
1801 Broadway, "

John F. Leavitt,
522 N. 3d, "

Adrienette LeFevre,
Blackwood

Ahab H. Lippencott,
21 Broadway, Camden

Alexander McAllister,
582 Federal, "

Alexander Marcy,
Riverton

Frederick W. Marcy,
6th and Penn, Camden

J. W. Martendale,
2303 Federal, "

William E. Miller,
8th and Mt. Vernon, "

Marcus K. Mines,
532 West, "

Joseph L. Nicholson,
400 Penn, "

M. W. Osmun,
815 Broadway, "

Howard F. Palm,
614 N. 2d, "

William R. Powell,
702 Market, "

William H. Pratt,
406 N. 6th, "

Sophia Presley,
323 N. 4th, "

Ernest S. Ramsdell,
423 Linden, "

Emma M. Richardson,
581 Stevens, "

Frank Neall Robinson,
518 Linden, "

Alex. S. Ross,
565 Stevens, "

Orris W. Saunders,
1813 S. 6th, "

E. A. Y. Schellenger,
429 Cooper, "

Jennie S. Sharp,
412 Broadway, "

Ezra B. Sharp,
412 Broadway, "

Charles H. Shivers,
Haddonfield

J. Anson Smith,
Blackwood

William A. Sprengar,
451 Kaighn ave., Camden

Frank O. Stem,
Berlin

John R. Stevenson, Haddonfield
Daniel Stout, Berlin
Daniel Strock, 818 Federal, Camden
H. Genet Taylor, 305 Cooper, "
John E. L. Vansciver, 4th and Berkley, "
William A. Wescott, Berlin
Wendell P. Wingender, 8th and Market, Camden
Frank M. Wood, Broadway and Washington, "
E. B. Woolston, Marlton

HONORARY MEMBERS.

G. W. Boughman, Marshalltown, New Castle Co., Del.
Richard C. Dean, U. S. Navy
Chas. G. Garrison, Merchantville
J. W. Hewlings, Moorestown
J. Orlando White, 329 Cooper, Camden

No. members, 75.

CAPE MAY COUNTY.

Society organized March 12, 1885. Meets first Tuesday in May and October.

Jos. C. Marshall, *Pres.*, *Tuckahoe*
Nathan A. Cohen, *V.-Pres.*, *Wildwood*
Daniel K. Webster, *Sec'y*, *South Seaville*
Randolph Marshall, *Treas.*, *Tuckahoe*
Wm. A. Lake, *Censor*, *Cold Spring*
V. M. D. Marcey, *Censor*, *Cape May City*
B. T. Abbott, *Ocean City*
George B. Adams, *Wildwood*
John B. Dix, *Cape May Court House*
J. S. Douglas, *Tuckahoe*
Anna Hand, *Cape May City*
A. L. Leach, " "
James Mecray, " "
Emelin Physic, " "
J. M. Slaughter, *Wildwood*
Eugene Way, *Dennisville*
Julius Way, *Cape May Court House*
Wesley R. Wales, *Cape May City*

HONORARY MEMBERS.

Chas. M. Gandy, *U. S. Army*
J. H. Ingram, *China*
Jonathan Leaming, *Cape May Court House*

No. members, 18.

CUMBERLAND COUNTY.

Society organized December 8, 1818. Annual meeting second Tuesday in April.

Edward S. Fogg, *Pres.*, *Bridgeton*
Mary J. Dunlap, *V.-Pres.*, *Vineland*
M. K. Elmer, *Sec'y*, *Bridgeton*
Jos. Tomlinson, *Treas.*, *Bridgeton*
Walter P. Glendon, *Rep.*, *Cedarville*

O. H. Adams,	*Vineland*	Ferdinand Jones,	*Millville*
J. C. Applegate,	*Bridgeton*	A. R. Judson,	*New Port*
Frank M. Bateman,	*Cedarville*	Reba Lloyd,	*Bridgeton*
Samuel Bennett,	*Millville*	Samuel D. Mayhew,	"
N. H. Burt,	*Ocean City*	H. G. Miller,	*Millville*
Alfred Cornwell,	*Bridgeton*	C. B. Neal,	"
T. G. Davis,	"	W. L. Newell,	"
Gafton E. Day,	*Millville*	David H. Oliver,	*Bridgeton*
S. T. Day,	*Port Norris*	T. J. Smith,	"
E. L. Diament,	*Bridgeton*	S. M. Snyder,	*Greenwich*
H. W. Elmer,	"	Ellsmore Stites,	*Bridgeton*
C. S. Frankle,	*Millville*	J. R. C. Thompson,	"
E. Stanley Goudy,	*Deerfield*	F. P. Wainwright,	"
L. L. Hand,	*Millville*	J. W. Wade,	*Millville*
Ernest Hummell,	*Shiloh*	C. W. Wilson,	*Vineland*
Lester Hummell,	*Greenwich*	S. M. Wilson,	*Bridgeton*

ASSOCIATE MEMBERS.

W. E. Ashton, 2011 Walnut street, Philadelphia, Pa.	Chas. P. Noble, 1509 Locust street, Philadelphia, Pa.
J. M. Barton, 1314 Spruce street, "	Chas. A. Oliver, 1507 Locust street, "
J. Chalmers DaCosta, 2045 Walnut street, "	David Reisman, 326 S. 16th street, "
B. C. Hirst, 1821 Spruce street, "	H. A. Hare, 1801 Spruce street, "
W. W. Keen, 1729 Chestnut street, "	Judson Daland, 317 S. 18th street, "

HONORARY MEMBER.

Ephriam Bateman, *Cedarville*

No. members, 37.

ESSEX COUNTY.

Society organized June 8, 1816. Annual meeting first Tuesday in April.

Walter S. Washington, *Pres.*, 8 Washington place., Newark	William H. Areson, Upper Montclair
Richard C. Newton, *V.-Pres.*, Montclair	Maurice Asher, 20 Court street, Newark
Archibald Mercer, *Sec'y*, 31 Washington street, Newark	Charles H. Bailey, Bloomfield
Charles D. Bennett, *Treas.*, 167 Clinton avenue, "	William O. Bailey, 282 South Orange avenue, Newark
William S. Disbrow, *Rep.*, 151 Orchard street, "	Aaron K. Baldwin, 291 Plane street, "

Samuel H. Baldwin,
473 Clinton avenue, Newark

Winfred E. Baldwin,
462 Orange street, "

Frederick W. Becker,
478 Clinton avenue, "

George C. Becket,
East Orange

Angelo R. Bianchi,
103 Seventh avenue, Newark

Arthur W. Bingham,
East Orange

William D. Bleick,
340 Waverly avenue, Newark

Herman C. Bleyle,
118 Union street, "

John H. Bradshaw,
Orange

Rudolph Braun,
180 Polk street, Newark

William M. Brien,
Orange Valley

James S. Brown,
Montclair

William Buerman,
352 Belmont avenue, Newark

Charles V. Burke,
136 Bowery street, "

Edwin L. Burns,
269 Broad street, "

Robert L. Burrage,
East Orange

Carl Büttner,
Orange

Wellington Campbell,
Short Hills

Fletcher F. Carman,
Montclair

William E. Carroll,
481 Broad street, Newark

Levi W. Case,
Montclair

Douglas A. Cater,
Orange

William J. Chandler,
South Orange

Albion C. Christian,
Irvington

J. Henry Clark,
12 Walnut street, Newark

Henry L. Coit,
51 Halsey street, Newark

Horace C. Cory,
484 Broad street, "

Everit P. Courtright,
24 Fulton street, "

Theodore W. Corwin,
5 West Park street, "

David H. Crawford,
14 Bridge street, "

Maximillian Danzis,
46 Mercer street, "

Peter P. Davenport,
Vailsburg

William H. K. Davis,
East Orange

John Dennis,
287 Belleville avenue, Newark

Winfield S. DeVausney,
55 8th avenue, "

Frank Devlin,
90 Congress street, "

Richard G P. Dieffenbach,
222 South Orange avenue, "

Daniel M. Dill,
425 South Orange avenue, "

Walter Dodge,
Orange

Arthur C. Dougherty,
158 Washington street, Newark

John L. Duryee,
436 High street, Newark

Wells P. Eagleton,
15 Lombardy street, "

Sarah M. Edwards,
207 Summer avenue, "

Julius Egge,
439 Washington street, "

Linn Emerson,
Orange

David E. English,
Millburn

James R. English,
800 Clinton avenue, Newark

Joseph Fewsmith,
47 Central avenue, "

Thomas S. P. Fitch,
Orange

Richard P. Francis,
Montclair

Richard D. Freeman,
South Orange

Mathias T. Gaffney,
211 Plane street, Newark

Ruel S. Gage,
17 Gould avenue, "

Frank O. Garrison,
South Orange

William Gauch,
199 High street, Newark

Isabel M. Geddes,
16 James street, "

Robert F. Gillen,
36 Clinton street, "

Herman A. Glatzmaver,
129 Wickliffe street, "

William M. Goodwin,
88 Congress street, "

Francis S. Gordon,
271 Clifton avenue, "

William B. Graves,
East Orange

Thomas N. Gray,
"

Solomon Greenbaum,
142 West Kinney street, Newark

Bernhard H. Greenfield,
145 South Orange avenue, "

Chauncey B. Griffiths,
145 Monmouth street, "

Emil A. Guenther,
159 West Kinney street, "

Robert A. Guliana,
231 Orange street, "

John F. Hagar,
88 Ferry street, "

Charles W. Hagen,
224 South Orange avenue, "

John F. Hagerty,
297 Central avenue, "

Eleanor Haines,
934 Broad street, "

Hugh M. Hart,
16 Gouverneur street, "

Levi W. Halsey,
Montclair

Edward H. Hammill,
232 Roseville avenue, Newark

Thomas W. Harvey,
Orange

E. Zeh Hawkes,
15 Central avenue, Newark

Joseph H. Haydon,
22 Brientnall place "

John Hemstath
36 Spruce street, "

Herman C. H. Herold,
77 Congress street, "

Peter V. P. Hewlett,
181 Plane street, "

William H. Hicks,
425 South Orange avenue, "

Livingston S. Hinckley,
182 Clinton avenue, "

Edgar Holden,
13 Central avenue, "

Edgar Holden, Jr.,
13 Central avenue, "

L. Eugene Hollister,
138 Clinton avenue, "

George J. Holmes,
17 Pennington street, "

William J. Houck,
110 Bloomfield avenue, "

Ralph H. Hunt,
East Orange

Charles L. Ill,
138 Clinton avenue, Newark

Edward J. Ill,
1002 Broad street, "

Frederick C. Jacobson,
108 Washington street, "

Jotham C. Johnson,
11 Tichenor street, "

William A. Judson,
270 Clifton avenue, "

William F. Keim,
7 Roseville avenue, "

George R. Kent,
37 Eighth avenue, "

Charles J. Kipp,
560 Broad street, "

Joseph M. W. Kitchen,
East Orange

Francis E. Knowles,
South Orange

Louis A. Koch,
37 Warren street, South Orange

Henry A. Korneman,
251 Springfield avenue, Newark

Stephen G. Lee,
Orange

Charles F. Lehlbach,
537 High street, "

Jesse D. Lippincott,
304 Summer avenue, "

Frank W. Lockwood,
East Orange

Herbert W. Long,
119 Madison street, "

Thomas W. Lowerre,
30 Hill street, "

Calista V. Luther,
South Orange

Ernest M. Lyon,
282 Broad street, Newark

Daniel L. McCormick,
252 Mulberry street, "

Henry D. McCormick,
Verona

Floy McEwan,
299 Bellevi.le avenue, Newark

William H. McKenzie,
942 Broad street, "

Augusta M. Madison,
188 Roseville avenue, "

James M. Maghee,
Orange

William H. Martland,
1182 Broad street, Newark

Henry E. Mathews,
Orange

Sarah R. Mead,
16 James street, Newark

Frank B. Meeker,
163 First street, "

Pancrazio M. Megaro
313 High street, "

Elizabeth Mercelis,
Montclair

Franklin L. Meyer,
122 Halsey street, Newark

Andrew M. Mills,
122 Washington street, "

Augustus J. Mitchell,
74 South street, "

Winthrop D. Mitchell,
East Orange

Clement Morris,
77 Washington avenue, Newark

Eugene W. Murray,
493 Summer avenue, Newark

Frederick C. Nadler,
33 Green street, "

Albert B. Nash,
10 South 13th street, "

Emanuel Newman,
81 New street, "

Anna B. Newton,
South Orange

Willis C. Noble,
Montclair

Henry W. Nolte,
255 Mulberry street, Newark

Victor Parsonnet,
134 West Kinney street, "

Edward E. Peck,
Caldwell

William Pennington,
Irvington

William Petry,
325 South Orange avenue, Newark

Edward D. Phelan,
56 Pennsylvania avenue, "

Thomas F. Phelan,
Orange

George P. Philhower,
Nutley

Frank W. Pinneo,
159 Fourth avenue, Newark

Charles R. Pittinger,
82 Congress street, "

Daniel W. Poor,
East Orange

Katherine Porter,
Orange

Palmer A. Potter,
East Orange

Robert C. Potter,
34 Centre street, Newark

Henry A. Pulsford,
South Orange

William O'G. Quinby,
80 Columbia street, Newark

John M. Rand,
12 Hill street, "

Charles H. Randall,
50 3d avenue, "

William Rankin,
23 Cedar street, "

Joshua W. Read,
82 Park place, Newark

Robert C. Ribbans,
63 Central avenue, "

Edward M. Richman,
248 Mulberry street, "

Philip Ricord,
268 Bank street, "

Samuel E. Robertson,
344 Lafayette street, "

Benjamin A. Robinson,
265 Mulberry street, "

Manning N. Robinson,
159 Elm street, "

William D. Robinson,
East Orange

Hugh P. Roden,
345 Washington street, "

William J. Roeber,
24 Monmouth street, "

George A. Rogers,
294 Bank street, "

Robert H. Rogers,
1195 Broad street, "

Clarence Rostow,
655 High street, "

George W. Rolerfort,
243 Plane street, "

Mefford Runyon,
South Orange

Anthony B. Russell,
East Orange

Charles A. Schneider,
44 Hillside place, Newark

William A. Schopfer,
43 Read street, "

Charles A. Schureman,
22 Hill street, "

Emanuel Schwartz,
561 High street, "

Edward Sealy,
369 Washington street, "

Edgar C. Seibert,
Orange

William F. Seidler,
21 Ferry street, Newark

Marco Seidman,
489 High street, "

Sumner Schailer,
259 Clinton avenue, "

Elbert S. Sherman,
159 Summer avenue, Newark

William F. Shick,
31 Park street, "

M. Herbert Simmons,
Orange

Daniel M. Skinner,
Belleville

Anna L. Smith,
Montclar

E. Fayette Smith,
9 Fulton street, Newark

D. Winans Smith,
201 Walnut street, "

Joseph F. Somerhof,
146 William street, "

Edward Staehlin,
493 High street, "

Jacob S. Stage,
95 Jefferson street, "

Robert G. Stanwood,
117 North 6th street, "

Edwin Steiner,
492 High street, "

Carlyle E. Sutphen,
185 Roseville avenue, "

Edward B. Sutphen,
999 Broad street, "

Theron Y. Sutphen,
999 Broad street, "

Martin J. Synnott,
Montclair

Henry A. Tarbell,
Irvington

Charles E. Teeter,
418 Orange street, Newark

Francis J. E. Tétreault,
Orange

Charles W. Titus,
126 North 7th street, Newark

Henry A. Towle,
16 Halsey street, "

Sidney A. Twinch,
598 Broad street, "

Charles F. Underwood,
259 Mt. Prospect avenue, "

Herbert B. Vail,
Belleville

Sarah E. Van Duyne,
245 Belleville avenue, Newark

George A. Van Wagenen,
101 North 6th street, Newark
Maria M. Vinton,
Orange
Benjamin H. Voelbel,
Vailsburg
George N. Wait,
569 High street, Newark
David L. Wallace,
202 Clinton avenue, "
Henry J. F. Wallhauser,
47 New street, "
Aaron C. Ward,
325 Clinton avenue, "
Edwin M. Ward,
Bloomfield
George L. Warren,
77 Houston street, Newark
William H. Warren,
443 Summer avenue, "
Frederick Webner,
96 Clinton avenue, "
Louis Weiss,
61 Beacon street, "
George O. Welshman,
150 Summer avenue, "
Lars T. Wendelboe,
104 West street, "
Elmer G. Wherry,
414 Clinton avenue, Newark
Edward H. White,
475 Clinton avenue, "
William H. White,
Bloomfield
Henry B. Whitehorne,
Verona
Miller R. Whitenack,
19 Bathgate place, Newark
Albert Wickman,
325 Washington street, "
W. Stockton Wilson,
96 Montclair avenue, "
Edward E. Worl,
271 High street, "
James A. Wormley,
83 New street, "
James T. Wrightson,
10 Central avenue, "
Charles Young,
23 East Kinney street, "
Joseph C. Young,
964 Broad street, "
Charles M. Zeh,
481 Broad street, "

No. members, 237.

GLOUCESTER COUNTY.

Society organized December, 1818. Annual meeting, third Thursday in January.

Joseph M. Husted, *Pres.*, *Clayton*
Wm. Brewer, *V.-Pres.*,
Woodbury
Geo. E. Reading, *Sec'y & Treas.*,
Woodbury
L. M. Halsey, *Censor*,
Williamstown
Jas. Hunter, Jr., *Censor*, *Westville*
Harry A. Stout, *Censor*, *Wenonah*
Wesley Grant Simmons, *Rep.*,
Swedesboro
Samuel F. Ashcraft, *Mullica Hill*
Henry H. Clark, *Woodbury*
Henry B. Diverty, *Woodbury*
Elias M. Duffield, *Glassboro*
J. Gaunt Edwards, *Williamstown*
C. Frank Fisler, *Clayton*
T. Franklin Gifford, *Woodbury*
Chas. S. Heritage, *Glassboro*
Eugene Z. Hillegas, *Mantua*
George C. Laws, *Paulsboro*
M. Jones Luffbary, *Glassboro*
James C. McClure, *Williamstown*
Eugene T. Oliphant, *Bridgeport*
Cyrus B. Phillips, *Hurffville*
Albert Porch, *Clayton*

U. S. Grant Sparks, *Mantua*
Samuel F. Stanger, *Harrisonville*
P. E. Stilwagon, *Bridgeport*
William M. Stratton, *Woodbury*
B. A. Waddington, *Salem*
Howard A. Wilson, *Woodbury*

HONORARY MEMBERS.

George W. Bailey, *Philadelphia*
Chas. M. Burk, "
Henry C. Clark, *Woodbury*
Judson Daland, *Philadelphia*
E. E. DeGrofft, *Woodstown*
Hobart A. Hare, *Philadelphia*
William H. Iszard, *Camden*
Chas. P. Noble, *Philadelphia*
Mordecai Price, 1335 Spring Orchard street, "
Chas. S. Turnbull, 1935 Chestnut street, "

No. members, 28.

HUDSON COUNTY.

Organized October 1, 1851. Annual meeting first Tuesday in May.

John P. Henry, *Pres.*, 907 Summit avenue, Jersey City
Imanuel Pyle, *Sec'y*, 54 Monticello avenue, "
Henry H. Brinkerhoff, *Treas.*, 695 Bergen avenue, Jersey City
Warner Allen, 235 Ogden avenue, "
Henry Allers, 109 Harrison avenue, Harrison
Edward C. Armstrong, 512 Fulton street, Town of Union
Henry D. Abbott, 24 East 33d street, Bayonne
William J. Arlitz, 630 Bloomfield street, Hoboken
Edward P. Buffett, 804 Bergen avenue, Jersey City
Henry H. Burnett, 724 Washington street, Hoboken
John J. Broderick, 355 Pacific avenue, Jersey City
Edward L. Brill, 2 Madison avenue, "
Henry J. Bogardus, 487 Bergen avenue, "
Oliver R. Blanchard, 37 Clinton avenue, "
Nathan G. Bozeman, New York
Frank F. Bowyer, 262 Barron street, Jersey City
John J. Bauman, 661 Jersey avenue, "
J. G. Lewis Borgmeyer, 90 W. 8th street, Bayonne
E. Mills Baker, 103 Wayne street, Jersey City
Louis Baumann, 250 5th street, "
W. Sims Boyd, 221 8th street, "
William M. Brooke, Avenue C and 42d street, Bayonne
O. H. Ball, 101 Garden street, Hoboken
Burdette P. Craig, Boulevard and Highland ave., Jersey City
John E. Corrigan, 546 Bramhall avenue, "
Talbot R. Chambers, Mercer street and Jersey ave., "
Charles W. Cropper, 85 Gifford avenue, "
S. Herbert Culver, 98 Magnolia avenue, "
Romeo F. Chabert, 104 7th street, Hoboken
Frederick M. Corwin, 7 W. 6th street, Bayonne

Charles B. Converse,
218 Palisade avenue, Jersey City

John A. Chard,
14 Virginia avenue, "

John F. Connelly,
276 Avenue C, Bayonne

Frank M. Childs,
927 Washington street, Hoboken

D. LeRoy Culver,
287 York street, Jersey City

George M. Culver,
49 Tonnelle avenue, "

C. W. Crankshaw,
2549 Boulevard, "

Gordon K. Dickinson,
278 Montgomery street, "

Edwin K. Dunkel,
264 Montgomery street, "

Lucius F. Donahue,
33 Dodge street, Bayonne

Alexander Dallas,
24 E. 22d street, "

R. H. Dinglestedt,
619 Hudson street, Hoboken

Arthur DeLong,
659 Jersey avenue, Jersey City

Charles L. DeMerritt,
302 Shippen street, Hoboken

Louis Dodson,
662 Jersey avenue, Jersey City

M. O. F. Dolphin,
112 4th st., Hoboken

T. N. Dovey,
10 E. 34th street, Bayonne

Benjamin Edge,
95 Wayne street, Jersey City

James G. Enwright,
297 York street, "

John R. Everitt,
38 Boyd avenue, "

Chauncey V. Everitt,
38 Boyd avenue, "

James A. Exton,
75 Beach street, Arlington

Joseph F. Finn,
131 Danforth avenue, Jersey City

William F. Faison,
105 Grand street, "

John Faber,
289 Central avenue, "

N. Frederick Feury,
687 Bergen avenue, Jersey City

William Friele,
203 Palisade avenue, "

Howard S. Forman,
640 Bergen avenue, "

George D. Fyfe,
70 Madison avenue, "

Charles H. Finke,
315 York street, "

P. W. Fracé,
106 11th street, Hoboken

Michael F. Foley,
710 Hudson street, "

Archibald C. Forman,
41 W. 32d street, Bayonne

Leonard J. Gordon,
Mercer street, Jersey City

Frank D. Gray,
568 Bergen avenue, "

Charles A. Gilchrist,
916 Hudson street, Hoboken

R. W. Gelbach,
809 Hudson street, "

E. Gamson,
41 W. 24th street, Bayonne

Hugo Gillé,
149 Congress street, Jersey City

Christopher D. Hill,
102 Grand street, "

Peter Hoffman,
209 Pavonia avenue, "

William L. Hetherington,
299 Varick street, "

Edward P. Hart,
316 Montgomery street, "

Bert. S. Heintzelmann,
43 W. 33d street, Bayonne

Samuel A. Helfer,
626 Hudson street, Hoboken

Max Hecht,
324 Shippen street, West Hoboken

J. Morgan Jones,
121 Sip avenue, Jersey City

J. Eugenia Jacques,
74 Waverly street, "

Calvin F. Kyte,
316 Pavonia avenue, "

A. John Kirsten,
289 Varick street, "

Richard Kuehne,
1118 Summit avenue, Jersey City

Gustave A. Krauss,
139 Mercer street, "

William L. Kudlich,
408 Hudson street, Hoboken

Charles K. Law,
Boulevard and Glenwood avenue, Jersey City

Mortimer Lampson,
322 Pacific avenue, "

Frederick W. Lambert,
157 Ocean avenue, "

Charles A. Limeburner,
79 Danforth avenue, "

John T. Luck,
Town of Union, Weehawken P. O.

John D. McGill,
124 Mercer street, Jersey City

George E. McLaughlin,
41 Crescent avenue, "

John J. McLean,
33 Hoboken avenue, "

Frank W. Mallalieu,
62 Monticello avenue, "

Edward Mulvaney,
487 Jersey avenue, "

John J. Mooney,
556 Jersey avenue, "

George W. Muttart,
702 Ocean avenue, "

Thomas J. McLoughlin,
558 Jersey avenue, "

William Menger,
421 Garden street, Hoboken

Thomas C. McNamara,
715 Park avenue, "

Edward G. Marks,
Elshermius street, Arlington

John Nevin,
Fairmount avenue, Jersey City

A. Nelson,
15 Sussex street, "

D. I. Nalatiski,
24 E. 22d street, Bayonne

M. W. O'Gorman,
38 Erie street, Jersey City

August W. Oestman,
961 Summit avenue, "

William J. Parker,
694 Bergen avenue, "

Charles H. Purdy,
312 Montgomery street, Jersey City

John C. Parsons,
311 York street, "

Wallace Pyle,
713 Bergen avenue, "

B. S. Pollak,
241 Grove street, "

Luigi Pezzè,
280 4th street, "

H. B. Don Piskorski,
552 Jersey avenue, "

Louis Poole,
521 Palisade avenue, West Hoboken

Joseph M. Rector,
307 York street, Jersey City

Oscar J. Russi,
256-a 9th street, "

Murray E. Ramsey,
2 Park street, "

Frederick C. Robertson,
Madison and Clinton avenue, "

Norman L. Rowe,
798 Grand street, "

Henry B. Rue,
931 Bloomfield street, Hoboken

James H. Rosenkranz,
826 Hudson street, "

George W. Shera,
489 Jersey avenue, Jersey City

Robert Stewart,
Grand street, "

Henry Spence,
681 Bergen avenue, "

Harvey V. A. Smith,
102 Palisade avenue, "

Ferdinand W. Sauer,
314 Varick street, "

S. Henry Sulouff,
2 W. Hamilton place, "

Joseph F. Stack,
212 Garden street, Hoboken

Eben T. Steadman,
635 Washington street, "

Walter Steadman,
213 Garden street, "

George H. Sexsmith,
719 Avenue C, Bayonne

Josiah L. Sanborn,
17 E. 33d street, Bayonne

Pliney F. Stevens,
950 Avenue D, Bayonne
J. S. Smith,
16 W. 33d street, "
August A. Strasser,
115 Beach street, Arlington
Richard Schlemm,
116 Palisade avenue, Town of Union
Frank D. Stellwagon,
530 Union Place, "
L. H. Sheiner,
Bergenline avenue, "
Manning F. Squier,
234 Harrison avenue, Harrison
Hamilton Vreeland,
79 Summit avenue, Jersey City
Clarence M. Vreeland,
96 Danforth avenue, "
W. Perry Watson,
101 Bentley avenue, Jersey City
John E. West,
Cor. Ocean ave. and Union st., "
Otto A. Wiegand,
1151 Summit avenue, "
Joseph Wolfson,
302 Montgomery street, "
A. John Walschied,
309 Fulton street, Town of Union
A. W. Warden,
Town of Union, Weehawken P. O.
F. C. Wolff,
1136 Garden street, Hoboken
James W. Ware,
Avenue C and 46th street, Bayonne
Stanley R. Woodruff,
22 W. 22d street, "

No. members, 148.

HUNTERDON COUNTY.

Society organized June 12, 1821. Annual meeting fourth Tuesday in April.

William H. Schenck, *Pres.*, *Flemington*
Leon T. Salmon, *1st V.-Pres.*, *Lambertville*
Peter C. Young, *2d V.-Pres.*, *Ringoes*
O. H. Sproul, *Sec'y*, *Flemington*
Isaac S. Cramer, *Treas.*, "
Geo. W. Bartow, *Three Bridges*
Willard E. Berkaw, *Annandale*
John L. Chamberlin, *Sargeantsville*
Edward W. Closson, *Lambertville*
Wm. S. Creveling, *Stanton*
Frederick W. Decker, *Frenchtown*
John H. Ewing, *Flemington*
Theo. B. Fulper, *Glen Gardner*
Frank S. Grim, *Baptistown*
Fred. L. Johnson, *Stanton*
Moses D. Knight, *Clinton*
Frank W. Larison, *Lambertville*
Morris H. Leaver, *Quakertown*
Edward D. Leidy, *Flemington*
Edward H. Moore, *White House*
Alfred B. Nash, *Frenchtown*
Geo. L. Romine, *Lambertville*
Howard Servis, *Junction*
Louis C. Williams, *Lambertville*

HONORARY MEMBERS.

H. P. Loomis, *New York City*
W. D. Wolverton, *U. S. Army, Retired*

No. members, 24.

MERCER COUNTY.

Society organized May 23, 1848. Annual meeting second Tuesday in May.

George R. Moore, *Pres.*,
259 Hamilton avenue, Trenton

A. Dunbar Hutchinson, *V.-Pres.*,
419 Chestnut avenue, Trenton

Martin W. Reddan, *Sec'y.*
121 Perry street, "

I. M. Shepherd, *Treas.*,
188 South Broad street, "

H. M. Anderson, *Rep.*,
46 West State street, "

D. B. Ackley,
881 East State street, "

Charles F. Adams,
52 West State street, "

Charles L. Allen,
Box 258, "

Alex. Armstrong,
South Broad street, "

Elmer Barwis,
211 Hamilton avenue, "

Henry M. Beatty,
Centre and Ferry streets, "

Charles P. Britton,
State and Warren streets, "

A. T. Bruere,
106 Spring street, "

John Bruyère,
123 Perry street, "

William M. Carling,
230 South Clinton street, "

J. F. Chattin,
40 West State street, Trenton

W. A. Clark,
51 West State street, "

J. C. Craythorn,
Spring and Calhoun streets, "

Paul L. Cort,
Box 258, "

Henry B. Costell,
State and Clinton streets, "

Frank V. Cantwell,
Broad Street Bank Building, "

A. H. Dey,
430 East State street, "

Wm. Elmer,
44 West State street, "

E. K. Fee,
Lawrenceville

Geo. H. Franklin,
Hightstown

J. C. Felty,
Box 258, Trenton

Samuel Freeman,
South Broad street, "

E. J. Gordon,
1010 South Clinton avenue, "

W. J. Hall,
231 North Warren street, "

Chas. H. Halcombe,
334 West State street, "

E. S. Hawke,
22 Montgomery street, "

J. F. Higgins,
398 South Warren street, "

A. I. Hunt,
Hamilton square, "

Mozart Jenkins,
136 Walnut avenue, Trenton

M. M. Kent,
South Warren street, Trenton

Wm. S. Lalor,
129 North Warren street, "

Lyman Leavitt,
212 Chestnut avenue, "

Thos. H. MacKenzie,
528 East State street, "

Walter Madden,
219 Centre street, "

Benj. W. McGalliard,
229 East State street, "

James McGuire,
South Broad street, "

Chas. H. McIlwaine,
40 West State street, "

Chas. Mitchell,
Centre street, "

H. G. Norton,
429 East State street, "

N. B. Oliphant,
152 West State street, "

Geo. H. Parker,
420 East State street, "

Elmer H. Rogers,
126 North Warren street, Trenton

R. R. Rogers, Sr.,
110 East Hanover street, "

R. R. Rogers, Jr.,
610 Perry street, Trenton

Geo. M. Ridgway,
39 West State street, "

F. G. Scammell,
413 East State street, "

Jos. B. Shaw,
119 South Warren street, "

Cornelius Shepherd,
186 South Broad street, "

Geo. N. J. Sommer,
229 Perry street, Trenton

W. D. Stevenson,
303 East State street, "

G. Schoening,
223 Perry street, "

Geo. E. Titus,
Hightstown

W. B. Van Duyn,
Perry street, Trenton

Jno. W. Ward,
Box 258, "

David Warman,
Chestnut avenue, "

Chas. H. Waters,
4 Pennington avenue, "

David F. Weeks,
400 West State street, "

J. H. Wikoff,
Princeton

Wm. Wilbur,
Hightstown

P. W. Yard,
727 South Broad street, Trenton

HONORARY MEMBER.

Dr. Joseph K. Young,
222 South Sixteenth street, Philadelphia, Pa.

No. members, 65.

MIDDLESEX COUNTY.

Society organized June 16, 1816. Annual meeting third Wednesday in April.

William E. Ramsey, *Pres.*,
193 High street, Perth Amboy

Frank M Donohue, *V.-Pres*,
139 Albany street, New Brunswick

William M Moore, *Sec'y*,
75 Livingston avenue, "

David C. English, *Treas.*,
363 George street, "

Arthur L. Smith, *Rep.*,
55 Livingston avenue, "

John C. Albright,
194 Broadway, South Amboy

Thomas Alsop,
George and Washington sts., New Brunswick

John J. Bissett,
Main street, South River

H. Martyn Brace,
179 High street, Perth Amboy

Edgar Carroll,
Main street, Dayton

S. V. D. Clark,
89 Bayard street, New Brunswick

A. Schuyler Clark,
George and Washington sts., "

Edward B. Dana,
Main street, Metuchen

Benj. Guttman,
1 Elm Row, New Brunswick

Edward E. Haines,
134 David street, South Amboy

Frank C. Henry,
134 State street, Perth Amboy

George J. Howell,
294 Madison avenue, "

A. Clark Hunt,
Holly street, Metuchen

Henry H. Janeway,
11 Livingston avenue, New Brunswick

Henry Levy,
102 Smith street, Perth Abmoy

John L. Lund,
181 High street, "

E. A. Meacham,
South Amboy

William V. McKenzie,
Graham avenue, Metuchen

Daniel L. Morrison,
55 Paterson street, New Brunswick

Ferdinand E. Riva,
Main and Riva avenues, Milltown

Clarence M. Slack,
50 Livingston avenue, New Brunswick

David Stephens,
229 George street, "

Ira T. Spencer,
Main street, Woodbridge

John L. Suydam,
Jamesburg

Henry C. Symmes,
Cranbury

Ambrose Treganowan,
Main street, South Amboy

George W. Tyrrell,
222 State street, Perth Amboy

J. Leon White,
Main street, South Amboy

John G. Wilson,
186 High street, Perth Amboy

HONORARY MEMBERS.

Henry G. Cooke,
7 Livingston avenue, New Brunswick

John C. Holmes,
Cranbury

No. members, 34.

MONMOUTH COUNTY.

Society organized June 16, 1816. Annual meeting third Monday in May.

Wm. MacMillan, *Pres.*, *Perrineville*
D. McLean Forman, *Sec'y*, *Freehold*
I. S. Long, *Treas.*, "
Scudder J. Wooley, *Rep.*, *Long Branch*
A. T. Applegate, *Englishtown*
George H. Baker, *Long Branch*
E. M. Beach, *West Long Branch*
R. S. Bennett, *Asbury Park*
A. G. Brown, *Red Bank*
Wm. W. Beveridge, *Asbury Park*
Harvey Brown, *Freehold*
Henry G. Cook, *New Brunswick*
Ellis W. Crater, *Ocean Port*
J. F. Davison, *Asbury Park*
V. M. Disbrow, *Lakewood*
Edwin Field, *Red Bank*
D. D. Hendrickson, *Middletown*
H. A. Hendrickson, *Atlantic Highlands*
Wm. M. Hepburn, *Freehold*
A. H. Higgins, *Manasquan*
G. C. Hoagland, *Keyport*
W. H. Ingling, *Adelphia*
A. J. Jackson, *Matawan*
Samuel Johnson, *Asbury Park*
W. R. Kinmouth, *Farmingdale*
Cyrus Knecht, *Matawan*
S. R. Knight, *Spring Lake*
W. U. Kurtz, *Eatontown*
Sarah F. McIntosh, *Asbury Park*
Henry Mitchell. *Asbury Park*
F. C. Price, *Imlaystown*
P. B. Pumyea, *Allentown*
James Read, *Sea Bright*
Edgar Roberts, *Keyport*
P. J. Rafferty, *Red Bank*
Harry E. Shaw, *Long Branch*
W. G. Schaufler, *Lakewood*
Edw. F. Taylor, *Middletown*
John Taylor, *Asbury Park*
Chas. H. Thompson, *Belmar*
C. R. Treat, "
W. W. Trout, *Spring Lake*
Wm. B. Warner, *Red Bank*
George F. Wilbur, *Asbury Park*

Alex. Williamson, *Asbury Park*
W. S. Whitmore, *Oceanic*
I. B. Wainwright, *Manasquan*

HONORARY MEMBER.

George T. Welsh, *Passaic*

No. members, 47.

MORRIS COUNTY.

Society organized June 1, 1815. Annual meeting second Tuesday in March.

J. Willard Farrow, *Pres.*,	*Dover*	Francis H. Glazebrook,	*Morristown*
H. M. O'Riley, *Vice Pres.*,	*Morristown*	Elliott Gorton,	*Summit*
H. W. Kice, *Sec'y*,	*Wharton*	J. B. Griswold,	*Morristown*
Jas. Douglas, *Treas.*,	*Morristown*	H. A. Henriques,	"
Stephen Pierson, *Rep.*,	"	Fred. C. Horsford,	*Morris Plains*
N. H. Adsit,	*Succasunna*	Geo. L. Johnson,	"
C. Anderson,	*Madison*	A. A. Lewis,	"
R. D. Baker,	*Morris Plains*	H. B. McCarroll,	"
G. A. Becker,	*Morristown*	A. A. Macwithey,	*Pompton*
C. C. Beling,	*Morris Plains*	P. S. Mallon,	*Morris Plains*
L. F. Bishop,	*Morristown*	W. H. Martin,	*Madison*
A. E. Carpenter,	*Boonton*	C. N. Miller,	*German Valley*
A. R. Corwin,	*Morris Plains*	L. L. Mial,	*Morristown*
E. P. Cooper,	*Troy Hills*	Clifford Mills,	"
Harry A. Cossit,	*Morris Plains*	F. W. Owens,	"
T. R. Crittenden,	*Dover*	S. H. Reed,	*Madison*
A. W. Condict,	"	Wm. H. Risk,	*Summit*
I. W. Condict,	"	J. B. Risk,	"
R. L. Cook,	"	J. G Ryerson,	*Boonton*
G. O. Cummins,	"	M. S. Simpson,	*Middle Valley*
Harris Day,	*Chester*	E. Sutton,	*German Valley*
H. V. Day,	*Bloomingdale*	J. L. Taylor,	*Boonton*
G. S. DeGroot,	*Mendham*	H. C. Upchurch,	*Kenvil*
B. D. Evans,	*Morris Plains*	Harry Vaughn,	*Morristown*
Levi Farrow,	*Hackettstown*	Geo. W. V. Wilkinson,	"
F. W. Flagge,	*Rockaway*	J. Walters,	*Wharton*
G. H. Foster,	"	H. S. Wheeler	*Whippany*
W. S. Foster,	*Flanders*	Cuthbert Wigg,	*Boonton*
Wm. M. Garrison,	*Morris Plains*	W. J. Wolfe,	*Chatham*

HONORARY MEMBERS.

P. C. Barker, *Morristown*
P. A. Harris, *Paterson*

No. members, 58.

PASSAIC COUNTY.

Society organized July 14, 1844. Annual meeting third Tuesday in April.

M. W. Gillson, *Pres.*,
11 Lee Place, Paterson

J. W. Smith, *V.-Pres.*,
33 Clark street, "

H. V. Pike, *Sec'y*,
144 Hamilton avenue, "

D. T. Bowden, *Treas.*,
117 Paterson street, "

A. F. Alexander, *Rep.*,
379 Union avenue, "

J. M. Stewart, *Censor*,
Van Houton street, "

John L. Leal, *Censor*,
29 Hamilton street, "

Henry Kip, *Censor*,
90 Fair street, "

F. E. Agnew,
29 Hamilton street, "

J. W. Atkinson,
27 Church street, "

George H. Balleray,
115 Broadway, "

J. H. Banta,
119 Broadway, "

J. V. Bergin,
Bridge street, "

Charles R. Blundell,
"

W. Blundell,
236 Main street, "

J. A. Browne,
310 Grand street, "

V. E. Bullen,
156 Broadway, "

C. M. Campbell,
642 Main street, "

W. H. Carroll,
11 Jefferson street, Passaic

D. R. Crounse,
84 Bloomfield avenue, "

R. M. Curts,
30 Church street, Paterson

Jas. H. Curts,
30 Church street, "

G. S. Davenport,
Garfield

S. De Jager,
83 Bridge street, Paterson

F. F. C. Demarest,
29 Academy street, Passaic

Edward F. Denner,
26 Church street, Paterson

F. B. Donahue,
387 Main street, "

George Fisher,
77 Fair street, "

T. J. Fitzmaurice,
130 Beech street, "

William Flitcroft,
510 River street, "

O. V. Garnett,
154 Straight street, "

J. T. Gillson,
391 Main street, "

Philander A. Harris,
26 Church street "

J. H. Henggeler,
Bridge street, "

E. L. Henion,
16 Church street, "

W. B. Johnson,
170 Broadway, "

C. J. Kane,
349 Grand street, "

T. J. Kane,
349 Grand street, "

F. J. Keller,
349 Totowa avenue, "

H. H. Lucas,
192 Van Houten street, "

Bryan C. Magennis,
Bridge street, "

M. A. Mackintosh,
267 Ellison street, "

E. J. Marsh,
600 Park avenue, "

E. J. Marsh, Jr.,
Van Houten street, "

W. W. McAlister,
Little Falls

A. F. McBride,
397 Main street, Paterson

John C. McCoy,
158 Broadway, "

Frank McDede,
908 Main street, "

J. R. Merrill, 24 Church street, Paterson
Daniel T. Millspaugh, 43 Totowa avenue, "
E. B. Morgan, "
C. F. W. Meyers, 108 Broadway, "
R. Neer, 85 Hamilton avenue, "
W. Neer, 87 Fair street, "
W. K. Newton, 379 Ellison street, "
T. F. O'Grady, 374 Grand street, "
J. O'Donnell, 387 Main street, "
H. Parke, 273 Main street, "
J. P. Paxton, "
A. W. Rogers, 285 Broadway, "
B. H. Rogers, 213 Broadway, "
John N. Ryan, 275 Passaic street, Passaic
F. R. Sandt, 354 Park avenue, Paterson
C. H. Scribner, 79 Ward street, "
W. R. Smith, Little Falls
R. Stinson, 132 Broadway, Paterson
Isaac Surnamer, 53 Bridge street, "
M. J. Synott, Montclair
J. Tattersall, 1042 Main street, Paterson
G. W. Terriberry, 146 Broadway, "
R. A. Terhune, Passaic
P. H. Terhune, 126 Park place, "
F. H. Todd, 120 Broadway, Paterson
G. E. Tuers, 16 Church street, "
A. B. Vanderbeck, 160 Broadway, "
A. Ward Van Riper, 207 Main avenue, Passaic
C. Van Riper, 207 Main avenue, "
George Vreeland, 127 Hamburg avenue, Paterson
F. Vigna, 35 Ward street. "

No. members, 79.

SALEM COUNTY.

Society organized May 4, 1880. Annual meeting first Wednesday in May.

H.T. Johnson, *Pres.*, *Pedricktown*
John F. Smith, *V.-Pres.*, *Salem*
Henry Chavanne, *Sec'y & Treas.*, *Salem*
W. H. Carpenter, *Rep.* "
Dan'l Garrison, *Censor*, *Pennsgrove*
N. S. Hires, *Censor*, *Salem*
W. H. James, *Censor*, *Pennsville*
F. Bilderback, *Salem*
R. M. Davis, *Salem*
E. E. DeGroft, *Woodstown*
W. L. Ewen, *Alloway*
G. W. H. Fitch, *Daretown*
W. T. Good, *Quinton*
L. M. Halsey, *Williamstown*

Geo. E. Reading,	*Woodbury*	C. M. Sherron,	*Salem*
J. W. Richards,	*Fort Mott*	B. A. Waddington,	"

ASSOCIATE MEMBER.

W. A. Jaquett, D. D. S., *Salem.*

No. members, 18.

SOMERSET COUNTY.

Society organized May, 1816. Annual meeting last Tuesday in April.

C.R.P.Fisher, *Pres.*,	*Bound Brook*	F. J. Hughes,	*North Plainfield*
J. P. Hecht, *V. Pres.*,	*Somerville*	B. B. Matthews,	*Bound Brook*
J. H. Buchanan, *Sec'y*,	*North Plainfield*	J. F. McWilliams,	*Somerville*
		Josiah Meigh,	*Bernardsville*
T. H. Flynn, *Treas.*,	*Somerville*	W. H. Merrell,	*South Branch*
W. H. Long, Jr., *Rep.*,	"	M. C. Smalley,	*Gladstone*
J. B. Beekman,	*Pluckemin*	A. L. Stillwell,	*Somerville*
J. H. Cooper,	*Middlebush*	W. J. Swinton,	"
H. V. Davis,	*North Branch*	S. O. B. Taylor,	*Millstone*
A. H. Dundon,	*North Plainfield*	J. D. Ten Eyck,	*Franklin Park*
E. B. Funkhauser,	*Skillman*	F. A. Wild,	*Bound Brook*
Mary E. Gaston,	*Somerville*	H. M. Weeks,	*Skillman*
George Henry,	*Raritan*	P. J. Zeglio,	*North Plainfield*

HONORARY MEMBER.

John W. Ward, *Trenton.*

ASSOCIATE MEMBER.

E. R. Voorhees, M. D. C., *Somerville.*

No. members, 25.

SUSSEX COUNTY.

Society organized August 22, 1829. Annual meeting third Tuesday in May.

Milton N. Armstrong, *Pres.*,	*Newton*	Martin Cole,	*Hainesville*
		Jos. G. Coleman,	*Hamburg*
Harvey J. McClougham, *V.-Pres.*,	*Newton*	C. K. Davison,	*Stankope*
		C. E. Dowling,	*Sparta*
Shepard Voorhees, *Sec'y*,	"	Chas. M. Dunning,	*Franklin*
E. Morrison, *Treas.*,	"	B. W. Ferguson,	*Beemerville*
T. H. Andress,	*Sparta*	Bruno Hood,	*Newton*
L. G. Burd,	*Ogdensburg*	M. D. Hughes,	*Layton*

P. N. Jacobus, *Newton*
J. N. Miller, "
John Moore, *Sussex*
J. B. Pellet, *Hamburg*
J. C. Price, *Branchville*
H. D. Van Gaasbeck, *Sussex*

HONORARY MEMBERS.

Joseph Hedges, *Branchville*

No. members, 20.

UNION COUNTY.

Society organized June 7, 1869. Annual meeting second Wednesday in April.

Arthur Stern, *Pres.*,
218 East Jersey street, Elizabeth
Henry C. Pierson, *V. Pres.*,
Roselle
John P. Reilley, *Sec'y*,
215 Elizabeth avenue, Elizabeth
Robert R. Montfort, *Treas.*,
1051 East Jersey street, "
P. DuBois Bunting, *Rep.*,
11 Third street, "
F. C. Ard,
Plainfield
Frederick R. Bailey,
1165 East Jersey street, Elizabeth
Thomas F. Burnett,
249 Court street, "
William C. Boone,
Plainfield
W. E. Cladek,
Rahway
J. Ackerman Coles,
Scotch Plains
J. H. P. Connover,
1143 East Jersey street, Elizabeth
F. M. Corwin,
Bergen Point
John H. Carman,
Plainfield
Marc. L. Clowson,
"
N. W. Currie,
"
Alfred J. Donavan,
132 East Jersey street, Elizabeth
Thomas E. Dolan,
129 Livingston street, "
James R. English, Jr.,
Irvington
George W. Endicott,
Plainfield
J. T. Fritts,
Plainfield
Joseph Funk,
615 Elizabeth avenue, Elizabeth
Edgar B. Grier,
1145 East Jersey street, "
James S Green,
463 North Broad street, "
G. E. Galloway,
Rahway
William Gale,
Westfield
W. F. Gaston,
Plainfield
H. Page Hough,
Rahway
J. B. Harrison,
Westfield
B. W. Hoagland,
Woodbridge
Ellis W. Hedges,
Plainfield
B. Van O. Hedges,
"
Carl R. Kepler,
24 Central Park West, New York City
F. A. Kinch,
Westfield
Samuel Koengut,
116 Bond street, Elizabeth
Horace R. Livengood,
228 Elizabeth avenue, Elizabeth
Thomas F. Livengood,
1105 East Jersey street, "
Monroe D. Long,
Plainfield
Victor Mravlag,
1062 East Jersey street, Elizabeth
Thomas N. McLean,
1144 East Broad street, "

George W. McCallion, 702 First avenue, Elizabeth
J. K. McConnell, Cranford
William H. Murray, Plainfield
Edward R. O'Reilly, 167 Second street, Elizabeth
Albert Peltis, Plainfield
James T. Perkins, Cranford
Alonzo Pettit, 116 West Grand street, Elizabeth
Frederick H. Pierson, 440 N. Broad street, "
J. B. Probasco, Plainfield
Norman H. Probasco, "
Stephen T. Quinn, 125 Jefferson avenue, Elizabeth
John M. Randolph, Rahway
J. J. Reason, Carteret
Charles H. Schlichter, 1053 Elizabeth avenue, Elizabeth
Russell A. Shirrefs, 1158 East Jersey street, "
W. Updyke Selover, Rahway
Elihu B. Silvers, "
Frederick W. Sell, "
Milton A. Shangle, 1148 East Jersey street, Elizabeth
R. R. Sinclair, Westfield
G. W. Strickland, Roselle
William F. Turner, 1046 Elizabeth avenue, Elizabeth
T. H. Tomlinson, Plainfield
R. D. Tomlinson, "
N. W. Voorhees, 897 North Broad street, Elizabeth
A. F. Van Horn, Plainfield
Norton L. Wilson, 322 North Broad street, Elizabeth
Rufus B. Whitehead, 36 Third street, "
F. W. Wescott, Fanwood

No. members, 69.

WARREN COUNTY.

Society organized February 15, 1826. Annual meeting first Tuesday in June.

Chas. M. Williams, *Pres.*, *Washington*
Wm. C. Allen, *V. Pres.*, *Blairstown*
Wm. J. Burd, *Sec'y*, *Belvidere*
Wm. H. McGee, *Treas.*, "
J. H. Griffith, *Rep.*, *Phillipsburg*
W. C. Albertson, *Belvidere*
Isaac Barber, *Phillipsburg*
C. H. Boyer, *Riegelsville*
H. O. Carhart, *Blairstown*
G. W. Cummins, *Belvidere*
Frank W. Curtis, *Stewartsville*
F. W. Haggerty, *Vienna*
L. B. Hoagland, *Oxford*
John C. Johnson, *Blairstown*
F. J. LaRiew, *Asbury*
L. C. Osmun, *Washington, D. C.*
Louis C. Osmun, *Hackettstown*
J. M. Reese, *Phillipsburg*
C. B. Smith, *Washington*
G. O. Tunison, *Oxford*
Alva C. Van Syckle, *Hackettstown*

No. members, 21.

SUMMARY.

Atlantic,	47	Mercer,	65
Bergen,	38	Middlesex,	34
Burlington,	34	Monmouth,	47
Camden,	75	Morris,	58
Cape May,	18	Passaic,	79
Cumberland,	37	Salem,	18
Essex,	237	Somerset,	25
Gloucester,	28	Sussex,	20
Hudson,	148	Union,	69
Hunterdon,	24	Warren,	21
			1122

TRANSACTIONS

OF THE

MEDICAL SOCIETY OF NEW JERSEY.

ONE HUNDRED AND THIRTY-SEVENTH ANNUAL MEETING.

HELD IN ASBURY PARK, N. J.,

JUNE 23, 24 AND 25, 1903.

E. L. B. GODFREY, M. D., OF CAMDEN, PRESIDENT.

FIRST DAY—TUESDAY, JUNE 23D.

The meeting was called to order at the Coleman House, Asbury Park, by the President, Dr. E. L. B. Godfrey, of Camden, at 11.30 A. M.

The report of the Committee on Credentials was presented by Dr. W. J. Chandler as follows:

Twenty-six delegates from fourteen District Societies have thus far produced their credentials and are entitled to vote at this session.

The following reporters have fulfilled the requirements of the By-Laws and are entitled to the privileges of *ex-officio* delegates:

Atlantic—A. B. Shimer.
Bergen—J. W. Proctor.
Burlington—Joseph Stokes.
Camden—Joseph H. Wills.
Cape May—Daniel K. Webster.
Cumberland—Walter P. Glendon.
Essex—William S. Disbrow.
Hunterdon—Leon T. Salmon.
Gloucester—Wesley Grant Simmons.
Mercer—Martin W. Reddan.
Middlesex—Arthur L. Smith.

Morris—Stephen Sutphen.

Salem—W. H. Carpenter.

Somerset—W. H. Long, Jr.

Sussex—Sheppard Vorhees.

Warren—J. H. Griffith.

Nominees for permanent delegates are presented by fourteen District Societies as follows. Atlantic, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Middlesex, Morris, Passaic, Salem, Sussex, Union and Warren.

The following nominees have presented certificates in proper form and are eligible for election:

Atlantic County—E. A. Reilly, Atlantic City; W. E. Darnall, Atlantic City; J. A. Joy, Atlantic City (to fill vacancy).

Camden County—Alexander McAlister, Camden (to fill vacancy).

Cape May County—Randolph Marshall, Tuckahoe.

Cumberland County—W. L. Newell, Millville; J. C. Applegate, Bridgeton.

Essex County—Henry L. Coit, Newark; Theodore W. Corwin, Newark; John H. Bradshaw, Orange; David E. English, Millburn; Richard G. P. Dieffenbach, Newark; G. P. Philhower, Nutley; Edward Staehlin, Newark; Livingston S. Hinckley, Newark; Richard P. Francis, Montclair.

Gloucester County—Eugene T. Oliphant, Bridgeport.

Morris County—A. A. Lewis, Morristown.

Sussex County—H. D. Van Gaasbeck, Sussex (to fill vacancy); E. Morrison, Newton.

Union County—T. N. McLean, Elizabeth.

Warren County—G. W. Cummins, Belvidere.

Bergen, *Hudson*, *Hunterdon*, *Monmouth* and *Somerset* make no nominations.

Mercer makes no report.

The following nominees have failed to present their credentials:

Camden County—Joseph E. Hurff, Blackwood; William S. Jones, Camden; Harry H. Sherk, Camden.

Middlesex County—David Stephens, New Brunswick.

Passaic County—William K. Newton, Paterson.

Salem County—E. E. DeGroft, Woodstown (to fill vacancy); Daniel Garrison, Pennsgrove.

Imperfect credentials were presented by E. Hollingshead, of Pem-

berton, and R. H. Parsons, of Mount Holly, and they have been returned for correction. If proper certificates are produced they can be presented to you at a later period in the session.

On motion, the report was accepted.

The following members, as shown by the Registration Book, were present:

FELLOWS.

Jno. C. Johnson, Alex. W. Rogers, P. C. Barker, Charles J. Kipp, John W. Ward, H. Genet Taylor, Elias J. Marsh, John G. Ryerson, O. H. Sproul, William Elmer, T. J. Smith, David C. English, C. R. P. Fisher, Luther M. Halsey, J. D. McGill.

OFFICERS.

President, E. L. B. Godfrey, Camden; *Vice-Presidents*, Henry Mitchell, Asbury Park; A. W. Taylor, Beverly; Walter B. Johnson, Paterson; *Corresponding Secretary*, E. W. Hedges, Plainfield; *Recording Secretary*, William J. Chandler, South Orange; *Treasurer*, Archibald Mercer, Newark; *Standing Committee*, Henry W. Elmer, *Chairman*, Bridgeton; B. A. Waddington, Salem; W. H. Ireland, Camden; Charles Young, Newark; John P. Hecht, Somerville.

PERMANENT DELEGATES.

ATLANTIC—B. C. Pennington, Atlantic City; W. B. Stewart, Atlantic City; Wm. E. Darnall, Atlantic City.

BERGEN—Henry C. Neer, Park Ridge; David St. John, Hackensack; Samuel E. Armstrong, Rutherford.

BURLINGTON—J. Howard Pugh, Burlington; E. Hollingshead, Pemberton; R. H. Parsons, Mount Holly.

CAMDEN—Duncan W. Blake, Gloucester; William H. Ireland, Camden; Daniel Strock, Camden; William A. Davis, Camden; Harry H. Sherk, Camden; Alexander McAlister, Camden; Wm. S. Jones, Camden.

CUMBERLAND—S. T. Day, Port Norris; J. A. Applegate, Bridgeton; M. K. Elmer, Bridgeton; Joseph Tomlinson, Bridgeton.

ESSEX—Charles Young, Newark; Joseph C. Young, Newark; Herman C. Bleyle, Newark; William J. Chandler, South Orange; Edward J. Ill, Newark; George R. Kent, Newark; Daniel M. Skinner, Belleville; Charles H. Bailey, Bloomfield; Thomas S. P. Fitch,

Orange; Richard C. Newton, Montclair; Joshua W. Read, Newark; James T. Wrightson, Newark; Peter V. P. Hewlett, Newark; Theron Y. Sutphen, Newark; Charles F. Underwood, Newark; L. Engene Hollister, Newark; Charles D. Bennett, Newark; William B. Graves, East Orange; Robert G. Stanwood, Newark; Thomas W. Harvey, Orange; Aaron K. Baldwin, Newark; Edward Staehlin, Newark; Theo. W. Corwin, Newark; L. S. Hinckley, Newark; R. G. P. Dieffenbach, Newark; G. B. Philhower, Nutley; D. E. English, Millburn.

GLOUCESTER—George E. Reading, Woodbury; James Hunter, Jr., Westville; E. T. Oliphant, Bridgeport.

HUDSON—J. D. McGill, Jersey City; Romeo F. Chabert, Hoboken; Jos. M. Rector, Jersey City; Frederick N. Corwin, Bayonne; George E. McLaughlin, Jersey City; Mortimer Lampson, Jersey City; T. R. Chambers, Jersey City.

HUNTERDON—Isaac S. Cramer, Flemington; W. S. Creveling, Valley.

MERCER—Cornelius Shepherd, Trenton; Richard R. Rogers, Sr., Trenton; David Warman, Trenton; J. C. Felty Trenton; G. H. Franklin, Hightstown.

MIDDLESEX—Edward B. Dana, Jr., Metuchen; Ambrose Tregaanowan, South Amboy; F. M. Donahue, New Brunswick; David Stephens, New Brunswick.

MONMOUTH—Henry Mitchell, Asbury Park; D. McLean Forman, Freehold: Edwin Field, Red Bank; P. B. Pumyea, Allentown; George F. Wilbur, Asbury Park; Samuel Johnson, Asbury Park; Cyrus Knecht, Matawan.

MORRIS—Levi Farrow, Hackettstown; Cuthbert Wigg, Boonton; James Douglass, Morristown; Britton D. Evans, Morris Plains; A. A. Lewis, Morristown.

PASSAIC—W. B. Johnson, Paterson; P. A. Harris, Paterson; C. H. Scribner, Paterson; Robert M. Curts, Paterson; James M. Stewart, Paterson; Andrew F. McBride, Paterson.

SALEM—B. A. Waddington, Salem; W. H. James, Pennsville.

SOMERSET—S. O. B. Taylor, Millstone; J. P. Hecht, Raritan; A. L. Stillwell, Somerville.

SUSSEX—B. W. Ferguson, Beemerville.

UNION—Alonzo Pettit, Elizabeth; E. B. Silvers, Rahway; J. Ackerman Coles, Scotch Plains; T. H. Tomlinson, Plainfield;

James S. Green, Elizabeth; Thos. N. McLean, Elizabeth; Norton L. Wilson, Elizabeth; W. U. Selover, Rahway.

WARREN – J. M. Reese, Phillipsburg.

The Honorary Membership was represented by Cyrus F. Brackett, of Princeton.

The following were present as invited guests:

Chas. P. Noble, J. M. Baldy, Frank Fisher, J. P. Crozier Griffith, Judson Daland and Savary Pearce, of Philadelphia; J. J. Kinyoun, of Glenolden; R. B. Fitz Randolph, of Trenton; William M Leszynsky, of New York, and W. M. Troy, Portsmouth, Va.

The following annual delegates and corresponding members were present:

ATLANTIC—Philip Marvel, Walter Reynolds, Theodore Senseman, Atlantic City.

BERGEN—J. E. Pratt, Dumont.

BURLINGTON—Alex Marcy, Jr., Riverton; J. Clifford Haines, Vincentown; John J. Flynn, Mount Holly.

CAMDEN—P. M. Mecray, J. W. Fithian, Emma M. Richardson and William I. Kelchner, of Camden.

CUMBERLAND—D. H. Oliver, S. D. Mayhew, Bridgeton; H. G. Miller, G. E. Day, Millville; Ellsmore Stites, Bridgeton.

ESSEX—Thomas N. Gray, East Orange; Walter S. Washington, Chas. V. Burke, Edward H. Hamill, Newark; J. F. E. Tétreault, Orange; William J. Roeber, Wm. H. White, Edward E. Worl, William Buerrman, Charles Titus, Lars T. Wendelboe, Newark; S. G. Lee, East Orange; Maurice Asher, W. P. Eagleton, Sarah R. Mead, Isabel M. Geddes, Frank W. Pineo, John Hemsath, E. S. Sherman, Thos. W. Loweree, Newark; Calister V. Luther, South Orange.

GLOUCESTER—S. F. Stanger, Harrisonville.

HUDSON—W. F. Faison, I. Pyle, H. H. Brinkerhoff, J. P. Henry, Jersey City; S. A. Helfer, Hoboken, A. A. Strasser, Arlington; M. F. Squier, Harrison.

HUNTERDON—F. S. Grim, Baptistown; A. B. Nash, Frenchtown; Geo. W. Bartow, Three Bridges.

MERCER—A. I. Hunt, Hamilton Square; M. W. Reddan, J. F Chattin, David F. Weeks, F. G. Scammell, F. V. Cantwell, B. W. McGalliard, H. G. Norton, Wm. S. Lalor, Trenton.

MIDDLESEX—A. C. Hunt, Metuchen; Wm. E. Ramsey, F. C. Henry, F. Martyn Brace, John L. Lund, Perth Amboy; W. M. Moore, New Brunswick; Ira T. Spencer, Woodbridge.

MONMOUTH—Harvey Brown, I. B. Long, Freehold; W. W. Beveridge, John Taylor, J. F. Davison, Reginald S. Bennet, J. L. Coleman, Asbury Park; S. J. Wooley, Long Branch; D. D. Hendrickson, Middletown; J. B. Wainwright, Manasquan.

MORRIS—Eliot Gorton, Summit; L. L. Mial, R. D. Baker, Morris Plains; A. E. Carpenter, Boonton.

PASSAIC—D. T. Bowden, H. Kip, J. W. Smith, E. J. Marsh, Jr., F. E. Agnew, H. V. Pike, John C. McCoy, Paterson; F. F. C. Demarest, Passaic.

SALEM—C. M. Sherron, J. F. Smith, R. M. Davis, Salem; J. R. Richards, Fort Mott.

SOMERSET—J. Meigh, Bernardsville.

UNION—E. B. Grier, Elizabeth; J. B. Harrison, Westfield; F. C. Ard, Plainfield.

WARREN—Wm. J. Burd, Belvidere; Frank W. Curtis, Stewartsville.

The following Permanent Delegates were absent:

D. A. Currie, Englewood; Onan B. Gross, Camden; Wm. H. Iszard, Camden; Randolph Marshall, Tuckahoe; T. J. Smith, Bridgeton; O. H. Adams, Vineland; Wm. Rankin, Newark; Geo. A. Van Wagenen, Newark; Henry B. Whitehorn, Verona; Geo. C. Laws, Paulsboro; J. A. Exton, Arlington; Elmer Barwis, Thos. H. Mackenzie, C. F. Adams and H. B. Costil, Trenton; J. G. Wilson, Perth Amboy; F. C. Price, Imlaystown; I. W. Condict, Dover; Stephen Pierson, Morristown; F. E. Flagge, Rockaway; Calvin Anderson, Madison; Geo. A. Balleray, Paterson; J. L. Leal, John T. Gilson and M. A. Mackintosh, Paterson; Henry Chavanne, Salem; Mary E. Gaston, Somerville; E. Morrison, Newton.

The following Permanent Delegates have been absent from two consecutive annual meetings:

Wm. Rankin, Newark; Henry B. Whitehorn, Verona; Geo. C. Laws, Paulsboro; J. G. Wilson, Perth Amboy; F. E. Flagge, Rockaway; Calvin Anderson, Madison.

On motion of Dr. H. W. Elmer the reading of the

minutes of the last annual meeting was dispensed with.

Dr. H. W. Elmer presented the report of the Committee on Ethics and Judicial Business.

REPORT OF THE COMMITTEE ON ETHICS.

The American Medical Association, at the meeting held in New Orleans, made the following declaration: "The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet the emergencies of disease or accident."

In view of this decision, the Committee on Ethics in the case of the District Medical Society of Monmouth County against D. McL. Forman, M. D., would respectfully report that Dr. Forman has not been guilty of any conduct in violation of the present code of ethics.

Respectfully submitted,

H. W. ELMER, *Chairman.*

ASBURY PARK, N. J., June 23d, 1903.

On motion of Dr. Archibald Mercer, the report was accepted.

Dr. Elmer then presented as a supplementary report a communication from the Atlantic County Medical Society regarding the conduct and standing of one Dr. H. Walter, as follows:

June 15, 1903.

W. J. CHANDLER, M. D.,
Sec'y Medical Society of New Jersey.

Dear Doctor:—At a recent meeting of the Atlantic County Medical Society, the following resolution was adopted:

"*Resolved.* That it is the sense of the Atlantic County Medical Society that the charter under which Dr. H. Walter, of Atlantic City, in now granting diplomas is inconsistent with the present statutes regulating the practice of medicine in this State."

Therefore, we petition the Medical Society of New Jersey to take such action as in its judgment will be consistent with the question in point.

Fraternally yours,

E. GUION, *Secretary.*

A similar communication was received from A. Burton Shimer, Secretary of the Atlantic City Academy of Medicine.

Dr. Pennington: It is well known to most of you that we are in the midst of a fight, and while we are not now asking the backing of the State Society, we feel sure that ultimately the matter will reach the Medical Society of New Jersey. Of course, we shall be grateful for any assistance the State Society may give us. Dr. Walter pretends to be a graduate in medicine of the University of Pennsylvania, but he has been shown to be a graduate in veterinary medicine there. He stands at the top of the irregular practitioners, and is backed by the wealthy residents of Atlantic City, and is fighting this question stubbornly.

Dr. Elmer: The Judicial Committee has not had an opportunity to pass upon the question. Dr. Walter has already been arrested, and it is expected that his trial will come up in the September term of the court of Atlantic County.

Dr. C. Shepherd: I move that this petition of the Atlantic County Medical Society be referred to the Judicial Committee for investigation. Seconded by Dr. G. E. Reading and carried unanimously.

On motion of Dr. Reading, it was decided that the report of the Committee on Honorary Membership lie over until to-morrow, owing to the absence of the chairman of that committee.

Drs. J. P. Hecht, G. E. Reading and D. M. Skinner were appointed as the Auditing Committee.

Dr. Wilbur, of Asbury Park: I have just received a communication from the Acting Mayor of this city containing resolutions, passed by the Common Council last night, welcoming the Medical Society of New Jersey to Asbury Park. The resolutions were read.

On motion, the communication was received and placed on file.

On motion of Dr. Reading, the report* of the Treasurer, Dr. Archibald Mercer, was made the next order of business. After reading the report the Treasurer recommended that the assessment on the county societies for the ensuing year be one dollar per capita.

Dr. William Elmer, of Trenton, moved that the report be received and referred to the Auditing Committee. Seconded and carried.

Dr. William Elmer: I do not know that I am ready to accept the recommendation of one dollar as the tax on the county societies. Whether or not the assessment should be kept up at two dollars is a question. I understand that after the payment of these bills for the Transactions there will only be the narrow margin of $200. I personally believe it is a mistake to vary the assessment from year to year.

Dr. Mercer: I think there will be a balance of six or seven hundred dollars after all the bills this year have been paid. I, therefore, think an assessment of one dollar on the county societies is sufficient.

Dr. G. E. Reading: I move to adopt the recommendation of the Treasurer. I would not say that it was an assessment of only one dollar that put us behind, but it was not having any assessment at all for two or three years that did this. We have been collecting one dollar from the county societies as the annual tax for the last two years, and, as a result, the treasury is at present in excellent condition. Seconded and carried.

Dr. Mercer: I recommend that the bill of the Committe on the Revision of the By-Laws be ordered paid.

Dr. Reading: I move that the bills presented by the

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Treasurer and recommended to be paid be ordered paid. Seconded. Carried.

The Treasurer: We have among our assets four per cent. U. S. bonds which will fall due in January, 1907. These bonds are constantly depreciating in market value, and have already been called in and exchanged in most instances. I, therefore, move that a committee of three be appointed with power to sell these bonds and reinvest the money in such securities as they deem fit. Seconded by Dr. W. J. Chandler and carried unanimously.

The President appointed on this committee, Dr. Archibald Mercer, of Essex; Dr. W. B. Johnson, of Passaic, and Dr. T. R. Chambers, of Hudson County.

Dr. Philip Marvel, Atlantic City: Your Committee on Revision of the Constitution and By-Laws has labored faithfully and energetically for two years to give you a revision that will meet the needs and demands of your Society. In whatever particulars we have failed you must judge. In bringing this matter before you to-day for your consideration the Committee especially asks that you will take up this matter and act upon it, and will not so far ignore their efforts as to offer a motion to put it aside.

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Dr. Marvel then presented the report, which had been printed for distribution.

Dr. W. J. Chandler: I move that the Society begin at this time the consideration of this report. Seconded by Dr. Pennington.

Dr. W. B. Stewart, Atlantic City: I move as an amendment that the Chairman present simply the changes that have been made in the printed report. Seconded.

Dr. Pennington withdrew his second to the original motion, leaving Dr. Stewart's motion before the house. It was carried.

Dr. Marvel then read the changes in the printed report as follows:

Article IV., Section 1, first line, insert "only" after "shall be composed;" third line, insert "Associate" between "and" and "Delegates," and strike out "*ex Officio.*"

Strike out first three lines of Section 2.

Article IV., Section 5, first line, change "of," after "Delegates," to "to."

Article IV., Section 6, second line, insert "membership of the Medical Society of New Jersey" after "included in the," and strike out "foregoing offices;" in the third line, after "and Reporters are," insert "hereby constituted Associate," and strike out "*Ex officio,*" after "Delegates;" in the fifth line, change "or," after "general," to "and."

Article IV., Section 7, first and second lines, change "practicers of medicine who have risen to pre-eminence in the profession," to "physicians and surgeons who have attained distinction in the profession;" add to third line, "after the recommendation of the Committee on Honorary Membership."

Strike out Section 8, of Article IV.

Article IV., Section 9, third line, change "Society" to "President;" in the fifth line, insert "members for the day" after "elected," and change "for the day only," after "vote," to "of the members."

Article V., Section 1, first line, after "legislative," insert "and the Board of Trustees the executive."

Article V., Section 2, first line, change "may be" to "are;" in the third line strike out "and;" third and fourth lines, change "also the ex-Chairmen of the different sections when created," to "Chairmen of all committees requiring a written report, who have complied with the Constitution and By-Laws."

Article VII., Section 2, first line, strike out "have power to;" second and third lines, strike out "when the best interest of the Society is to be promoted thereby;" in fourth line, change comma after "Societies" to period; change "and," after "Societies," to "When;" in fifth line strike out "When approved."

Article IX., Section 3, third line, change "morning" to "afternoon."

Article X., first line, insert "Section 1" before "Funds;" in next to last line, change "such," before "purposes," to "no;" "as," after

"purposes," to "than," and strike out "but" at end of line; take last line away from Section 1 and let it constitute Section 2.

Article XII, change "pleasure," at end of second line, to "discretion."

Article XIII., make a new Section 1, as follows: Section 1. For a period of two years, and no longer, amendments to this Constitution may be offered by any member on giving written notice thereof of the proposed amendment, to the Recording Secretary of this Society (and to each Component Society) ninety days previous to the annual session, provided a two-thirds vote shall be required for its adoption, and provided, after two years Section 1 of Chapter XIII. shall be inoperative.

Article XIII., insert "Section 2" at beginning of first line, and in the fourth line change "that it," after "and," to "said amendment."

By-Laws, Chapter I., Section 1, second line, change "*Ex-officio*" to "Associate;" fourth line, change "privilege" to "provision."

Chapter 1, Section 4, first line, change "Permanent" to "All," and add to second line, "and failure to do so will be considered equivalent to absence."

Chapter II., Section 2, first line, after "or," insert "of."

Chapter III., Section 4, third line, insert "Third Vice President" before "and invited orators."

Chapter III., Section 5, first line, insert "and reports" after "all papers," and add to last line, "Permission to publish in medical journals may be granted by the Committee on Publication."

Chapter IV., strike out all of Section 1 after the words "annual orations," in fifth line.

Chapter IV., Section 2, fourth line, after "provided" insert "(1) that;" add to last line, "and (2) that each component society send at least one annual delegate."

Chapter IV., Section 3, third line, change "sit as members of" to "be seated in."

Chapter V., Section 2, change "the annual," at beginning of second line, to "all;" in third line, change "after the adjournment" to "at the close of the first session;" in fourth line, change comma after "committee" to a period; change "and," after "committee," to "When approved by the House of Delegates;" in the two last lines, change "within twenty minutes after the adjournment of the session" to "without said certificate they can not be approved by the House of Delegates."

Chapter V., Section 5, second line, change "a majority" to "two-thirds."

Chapter V., strike out Section 6.

Chapter VI., Section 1, in the second line after "New Jersey and" insert "of."

Chapter VI., Section 1, strike out all of last line after "By-Laws."

Chapter VI., Section 5, twelfth line, change "assistance" to "assistants;" in the fifteenth line, change "New Jersey Medical Society" to "Medical Society of New Jersey."

Chapter VII., first line, change "Section 5" to "Section 1," and change "required," after shall be," to "the privilege;" eleventh line, change "be considered equivalent to" to "constitute;" twelfth line, change comma after "Credentials" to a period; thirteenth line, change "which," at beginning of line, to "A," and "will prohibit the said delinquent reporter from" to "to do so will constitute a delinquency and will be so treated by the Committee on Credentials, which will decline to give said delinquent Reporter;" strike out all after "at that session" in last two lines.

Chapter XV., Section 3, next to last line, change "entitled" to "eligible;" last line, change "this," before "Society," to "their."

Chapter XV., transpose Section 3 and Section 4; Section 3 becoming Section 4, and Section 4 becoming Section 3.

Chapter XV., Section 7, second line, change "shall," after "his name," to "may;" in last line, strike out "without cost to himself."

There being some doubt as to whether the discussion of the By-Laws was in order at this time, and some members desiring that certain parts be explained, it was moved by Dr. Chandler that the members be allowed to discuss the Constitution and By-Laws and ask for explanations. Seconded. Lost.

Dr. Alexander McAlister, Camden, presented the report of the Committee on Business.*

On motion, the report was received and referred to the Standing Committee for publication in the Transactions.

Dr. H. W. Elmer read the following petition from Dr. Irwin H. Hance and others for permission to organize an entirely new county society in Ocean County:

All reports, papers, etc., marked thus (*) will be found in the Appendix.

LAKEWOOD, N. J., May 25th, 1903

To the Medical Society of the State of New Jersey:

GENTLEMEN:—We, the undersigned, being licensed practitioners in the County of Ocean, which at the present time has no district society, wish to organize said society and be represented in the State Society.

We do respectfully request that you grant us that privilege.

IRWIN H. HANCE.	A. M. HERON.
WILLIAM G. SCHAUFFLER.	PAUL T. KIMBALL.
V. M. DISBROW.	E. C. DISBROW.
GEO. W. MACMILLAN.	FRANK BROUWER.
HAROLD PITTIS.	RALPH R. JONES.

The President: If there is no objection, this communication will be referred to the Judicial Council.

Dr. W. J. Chandler: As this comes *from* the Judicial Council, and they may perhaps be in doubt as to what action should be taken, I think they would welcome some instructions from the Society. It would be well to advise the petitioners from Ocean County to proceed to reorganize the old society and come here next year with a delegation. Ocean County Society is not dead, but only suspended, according to our By-Laws. Its records appear to be lost. I, therefore, move that the physicians of Ocean County have the authority of this Society to reorganize and proceed regularly under their present charter. Seconded and carried unanimously.

Adjourned at 1.10 P. M.

AFTERNOON SESSION.

The meeting was called to order by the President at 3.15 P. M., and the session was opened with prayer by the Rev. George A. Gensmer, of Asbury Park, the pastor of the Lutheran Church.

Dr. H. W. Elmer: As Dr. Frank Brouwer, one of the

members of Ocean County Society, is present, I move that he be invited to sit with us as a corresponding member. Seconded and carried.

Dr. A. Mercer: I move that Dr. Phillip Y. Eisenberg, of the Medical Society of the State of Pennsylvania, be invited to sit with us as a corresponding member.

On motion of Dr. Chandler, Dr. J. N. McCormack, of Kentucky, was invited to sit with the Society as a guest, and the same motion was made with regard to Dr. Savary Pearce.

On motion of Dr. C. J. Kipp, this invitation was extended to all members of recognized medical societies in good standing.

Dr. John Taylor, of Asbury Park, presented the report of the Committee of Arrangements.*

On motion, the report was accepted.

Dr. E. W. Hedges presented the report of the Corresponding Secretary.*

On motion, it was referred to the Committee on Publication.

Dr. W. J. Chandler presented the report of the Recording Secretary.*

On motion, the report was accepted and ordered published in the Transactions.

Dr. Charles Young, Newark, presented the report of the Committee on Tuberculosis as follows:

The Committee on Legislative Action on Bovine Tuberculosis respectfully reports that during the past year there has appeared to the Committee no reason for meeting. There was no bill introduced into the Legislature of the State in regard to tuberculosis in cattle, nor as far as known was there any reference made to the subject during the late session.

Respectfully submitted,

CHARLES YOUNG, *Chairman.*

ASBURY PARK, June 23, 1903.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

On motion of Dr. Mercer, the report was accepted and referred to the Committee on Publication.

The consideration of the proposed revision of the Constitution and By-laws was then taken up.

Dr. C. J. Kipp: I move that we dispense with the reading of this report, as it has been already printed and distributed to the members. Seconded by Dr. E. J. Ill and carried.

Dr. Kipp: In view of the fact that this committee has been working on this subject for the past year, and its members have worked assiduously, I move that this report, as presented, be accepted as the Constitution and By-Laws of this Society. Seconded. It was then moved to amend by adding "to take effect at the close of this meeting." Seconded by Dr. A. McAlister.

The motion as thus amended was carried.

Dr. Cornelius Shepherd: I am aware that I am out of order, but as a member of this Society I think I have the right to be heard. I have attended this Society for over forty years, and here to-day, in the twinkling of an eye, without an opportunity for a word of protest, the Constitution of the Medical Society of the State of New Jersey has been overturned, defeated, and a new one adopted.

The President: The gentleman is out of order. He can move for a reconsideration if he so desires.

Dr. Kipp: I move that the thanks of the Society be extended to the committee which has presented to-day this revised Constitution and By-laws. Seconded and carried.

The President (To Dr. P. Marvel): I beg, sir, to extend to you and your committee the thanks of the Society for your very successful work.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Dr. Marvel: On behalf of the committee I am very glad to accept the thanks of the Society.

Dr. R. C. Newton, for the Committee on Dr. Newton's Paper, reported progress.

Dr. T. Y. Sutphen presented the report of the Committee on the Abuse of Medical Charities.*

On motion, the report was received.

Dr. W. B. Johnson: I should like to suggest a means of arriving at the desired result. It is to work through the charity organization societies of the State. There are already organized in several of the larger cities, charity organization societies, not for the purpose of extending charity, but for doing exactly as this committee has suggested, *i. e.*, investigating cases supposed to need charitable aid. Recently there has been organized in the City of Paterson such a charity organization society; I am sure there is such a society in Newark and one in the Oranges. As the abuse of medical charity occurs in the larger cities, it is fair to presume that these societies will be organized in time in every large city in the State. It is to be supposed that the officers of our institutions will prepare a daily list or a weekly list for the charity organization society, so that an investigation may be made of these applicants. It seems to me that an organized effort of this character is much better than the method suggested by the committee, *i. e.*, that the several charitable institutions employ their own officer. Organized effort in such work is certainly much more effective and satisfactory than individual effort, particularly as considerable experience is necessary to do this work well. It is easy for people who are to be investigated to impose upon all except such experienced workers. I hope this suggestion will be added to the committee's report before publication.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Dr. Paul M. Mecray, Camden: I have observed the practical workings of this scheme, and it has not been satisfactory. At the Cooper Hospital, at Camden, we have tried to carry out this plan. It has been found that a very large number of the names and addresses are fictitious. If the people are not worthy they do not mind such investigations, whereas the very people we should desire to help feel very much hurt. I hope the plan will be abandoned in Camden.

Dr. C. J. Kipp, Newark: I have been working for the past thirty-five years with a charitable institution, and my experience is that the abuse of medical charity is entirely in the hands of the medical profession. If physicians work in institutions which will not endeavor to restrict this abuse they should resign.

On motion, the report was adopted.

The Secretary: I should like to ask the committee if it desires to be continued.

The President: The committee is discharged unless a motion is made to continue it.

Dr. William Elmer: I move that a copy of the Constitution and By-Laws be printed by the Committee on Revision and be sent to every member of every District Society, the expense of the same to be defrayed by the general fund of the Society. Seconded.

Dr. William J. Chandler: I move to amend by adding "that the bill for the same shall be paid by the Treasurer on presentation," instead of being laid over for one year. Accepted by Dr. Elmer.

Dr. P. Marvel: This motion is not necessary, for the Board of Trustees can attend to such matters *ad interim*.

Dr. Charles Young, Newark: I cannot see the use of putting the Society to the expense of such publication, for the new Constitution and By-Laws will be published in the volume of Transactions.

Dr. Chandler: I endorse Dr. Young's views—that the expense of a special edition and its distribution is unnecessary.

The motion of Dr. Elmer was then put and lost.

Dr. Joseph Tomlinson, of Bridgeton, presented the report of the Committee on Dr. Tomlinson's paper on "The Present Methods of Education from the Standpoint of the Physician."*

Dr. A. K. Baldwin, Newark: I move that this report be received and that the recommendations made be indorsed by the Society.

Dr. C. J. Kipp: I second the motion, and would amend it by adding that these recommendations be carried out by the present committee.

The motion, as thus amended, was carried.

On motion of Dr. Newton, Dr. Savary Pearce, of Philadelphia, was requested to address* the Society on the subject of Dr. Tomlinson's paper.

Dr. Charles J. Kipp presented the report of the Delegates to the American Medical Association. He said: We were at the meeting of the House of Delegates, the proceedings of which have been published in the Journal of the American Medical Association. The most important thing done by that body was the changing of the Code of Ethics, now known as "The Principles of Medical Ethics." I can not do better than refer you to the explanatory preface of that document, as printed in the Journal of May 16, page 1379. (Reads this). I may add that the Committee, without any solicitation from your delegates, selected Atlantic City as the place for the next meeting of the American Medical Association.

On motion of Dr. P. Marvel, Dr. McCormack, of Kentucky, was granted the privileges of the floor.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Dr. McCormack said: I am glad to see that New Jersey is the twenty-seventh State that has now adopted the Constitution and By-Laws formulated and recommended by the American Medical Association. At the New Orleans meeting this number was not so large, but the States have fallen into line very rapidly, your State being the twenty-seventh.

It gives me great pleasure as the representative of the American Medical Association to extend words of very cordial greeting and encouragement to the oldest State medical society in the United States. With your great work I am more or less familiar, and I have every reason to believe that the experience which has been repeated over and over again in States which reorganized last year will probably be repeated here. I understand that by your action to-day you have increased your membership almost four-fold, adding the membership of the county societies to that of the State organization. In my own State, Kentucky, we had 400 members on our roll when we adopted this plan; at the end of the year we had 72 organized county societies and 1,600 members in good standing on our roll. The enthusiasm and the spirit of harmony and unity which pervaded that meeting were of far greater significance than could be accounted for by any mere increase in numbers.

The work which the American Medical Association has undertaken, and asks the State societies to undertake, is not Utopian, but it involves much self-sacrificing work on the part of your Council. It occurs to me that before this Society adjourns provision should be made for the appointment of and organization of your Council for this year. Unless this is done you lose a year in the work of organization, and I, therefore, suggest this for your consideration. This is better than waiting until

next year for such appointment to be done by your House of Delegates. If the work is to be made as far-reaching in New Jersey as it has been in the other States, it should be begun as soon as possible. What has occurred in Kentucky has occurred in Michigan, Tennessee, Arkansas and many other States, and I am sure I have good reason for congratulating you on the harmony and unity of your work, and if this spirit continues the same great results will come to the profession of your State which came to those who at first predicted that this was only an experiment.

Dr. Eisenberg, Delegate from the Medical Society of the State of Pennsylvania, said: It gives me great pleasure to make my bow to the oldest State Medical Society in the Union. I had no idea when I came here that your Society was so old. We, in Pennsylvania, can only number fifty-seven years, or about the age of the American Medical Association. I am glad to be with you, and, from the spirit which has been manifested this afternoon, I know your deliberations will be of profit. Situated as you are between the two great medical centres of New York and Philadelphia, and coming in contact with the leading investigators and scientific men of those centres, I know you must occupy the front rank in discussing the questions coming up before you. I know I shall go home after a pleasant and profitable time.

On motion of Dr. McAlister, the regular order of business, with the exception of the President's address, was then taken up.

The Secretary then read the list of nominees for permanent delegates recommended by the Committee on Credentials. (Previously reported.)

Dr. C. Shepherd: There seems to be some misapprehension with regard to Mercer County. We had a meet-

ing and selected three permanent delegates, Dr. Franklin, Dr. Clark and Dr. Bruyere. Why the secretary of our county society has not sent the proper credentials to the Secretary of the State Society I do not know. One certificate (that of Dr. Franklin) has been handed to me with the statement that it is not in proper form, yet it is just the form that has always been employed by our Society. If there is a special form our Secretary should have it.

The Secretary: Dr. Shepherd is mistaken in his statement that the form of Dr. Franklin's certificate is the same as that hitherto accepted from Mercer County. The form is printed at the bottom of page 15 of the By-Laws. I explained to Dr. Franklin in what way his credentials differed from this form. This form has been printed in the By-Laws for eight years, and hence the county societies are at fault if they fail to comply with it.

Dr. Ireland: Drs. McAlister and Sherk were elected at the same meeting and their credentials were supposed to have been given at the same time, yet Dr. McAlister's name is on the list and that of Dr. Sherk is not.

The Secretary: Dr. McAlister sent his certificate about three weeks ago; Dr. Sherk's has not been presented until this very moment. It is correct in form and can be accepted.

Dr. E. J. Marsh: I move that the Secretary be authorized to cast the ballot of the Society for the permanent delegates according to the list as read, with the addition of the name of Dr. Sherk. Seconded by Dr. Mercer and carried. The ballot was cast and they were declared elected.

Dr. H. W. Elmer, Bridgeton, presented the report of the Standing Committee.* On motion, the report was received.

All reports papers, etc., marked thus (*) will be found in the Appendix.

Dr. Skinner presented the report of the Auditing Committee, to the effect that they had examined the books and vouchers of the Treasurer and had found the same correct.

On motion, the report was accepted.

Dr. W. H. Ireland, Camden, presented the report on the "Progress in Medicine and Therapeutics."*

On motion of Dr. McAlister, it was accepted and referred to the Committee on Publication.

On motion of Dr. McAlister, Dr. J. L. Leal's paper on "Progress in State Medicine and Hygiene"* was ordered read by title and referred to the Committee on Publication.

On motion of Dr. McAlister, Dr. B. A. Waddington was permitted to read at this time his paper on "Progress in Laryngology."*

On motion, his report was accepted and referred to the Committee on Publication.

Dr. Charles Young, Newark, read the report on "Progress in Surgery."*

On motion, the report was received and referred to the Committee on Publication.

At the request of Dr. B. C. Pennington, Atlantic City, his paper, "Serum Therapy in the Treatment of Tetanus," was read by title and referred to the Committee on Publication.

The resignations of Dr. Alexander Marcy, Riverton, and Dr. A. W. Taylor, Beverly, as permanent delegates were read and, on motion of the Secretary, were accepted.

On motion, adjourned at 6 P. M.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

EVENING SESSION.

The Society reconvened at the call of the President at 9 P. M.

Dr. Philip Marvel, Atlantic City, reported a "Case of Amoeba-Coli Dysentery."* It was discussed by Dr. Daland, Philadelphia, and Dr. Marvel made some closing remarks.*

Dr. E. L. B. Godfrey, Camden, delivered the President's annual address, taking for his theme, "The Educational Standards of the Medical Profession of New Jersey, Past and Present."*

At the conclusion of this address, Dr. McAlister introduced Dr. Daniel Strock, of Camden, who, he said, had been selected by the staff of the Cooper Hospital, Camden, to present a gavel to Dr. Godfrey.

Dr. Daniel Strock, addressing the President, Dr. Godfrey, said:

Your colleagues of the Cooper Hospital attending staff delegated me to present their compliments on this occasion, when you have attained that position which is the laudable aim of every medical man in the State of New Jersey, the Presidency of the Medical Society of New Jersey. In doing this they have not lost sight of the fact that the honor has come to you as the member of a family that has existed for a number of years, and that has labored together in the cause of humanity. They have viewed your career for many years with great pleasure up to this pleasant culmination this evening. You have been instrumental in the Cooper Hospital in doing one of the grandest works carried on in this State, and they have learned to esteem and love you. You have been successively honored by your own profession, not only in the city and county, but in the state. As President of the Camden City Medical Society, of the Camen County Society, and of the New Jersey Sanitary Association, you have occupied important positions, and have filled them with great ability. Your address to-night has been along the lines which

All reports, papers, etc., marked thus (*) will be found in the Appendix.

have made you famous throughout this State. Your work upon the State Medical Examining Board has been very satisfactory to your colleagues, and also to the profession of the State. You have stood as a bulwark between the medical profession and the quack, pretender, and the charlatan.

As a culmination of this work, the medical profession has seen fit to raise you to this exalted position of President of the Medical Society of New Jersey. We, therefore, desire to present to you, as a slight token of esteem, a gavel made of the wood of the hospital in which you have done such noble work. There have been changes made in the hospital recently, and we have seized this opportunity to take some of the wood and make it into this gavel. In asking you to accept it we do so with the expression of our love and esteem, and we trust and know you will use it in the same spirit of fairness that has ever characterized your career.

Dr. Godfrey: Dr. Strock, I hardly know what to say in response to you and my colleagues for those kind words and for their gift. I assure you that I accept this token with the heartiest appreciation, and hope you will present to the staff the assurance of my highest regard for them.

Dr. J. M. Rector, Jersey City, read a paper, "Gynecology; Its History and Development."* It was discussed by Dr. W. F. Faison, of Jersey City.*

The President appointed Dr. Armstrong to represent Bergen County in the Nominating Committee, and the Secretary announced the names of the Nominating Committee as follows:

Atlantic—Theodore Senseman, Atlantic City.
Bergen—Samuel E. Armstrong, Rutherford.
Burlington—Alexander Marcy, Jr., Riverton.
Camden—Paul M. Mecray, Camden, *Chairman.*
Cape May— —— —— ——.
Cumberland—Joseph Thomlinson, Bridgeton.
Essex—Edward J. Ill, Newark.
Gloucester—Eugene T. Oliphant, Bridgeport.
Hudson—H. H. Brinkerhoff, Jersey City.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Hunterdon—G. W. Bartow, Three Bridges.
Mercer—Wm. S. Lalor, Trenton.
Middlesex—A. C. Hunt, Metuchen.
Monmouth—H. S. Brown.
Morris—James Douglass, Morristown.
Passaic—Henry Kip, Paterson.
Salem—Wm. H. James, Pennsville.
Somerset—A. L. Stillwell, Somerville.
Sussex - B. W. Ferguson, Beemerville.
Union—J. B. Harrison, Westfield.
Warren—Frank W. Curtis, Stewartville.

Dr. Daniel Strock, Camden, read a paper on "Osteopathy."*

On motion, the paper was accepted and referred to the Committee on Publication. It was discussed* by Dr. R. C. Newton, Montclair.

On motion, the Society adjourned at 11 P. M.

SECOND DAY—WEDNESDAY JUNE 24TH.

MORNING SESSION.

The meeting was called to order by the President at 10 A. M.

On motion of Dr. P. Marvel, Drs. Daland and Noble, of Philadelphia, and other visiting members, were made corresponding members for the day.

Dr. R. B. Fitz Randolph, of Trenton, presented a report on the "Progress in Bacteriology."*

On motion of Dr. McAlister, the report was accepted and ordered printed in the Transactions.

On motion, the discussion of Dr. Marvel's paper on dysentery was taken up.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Dr. L. M. Halsey, of Williamstown, presented the report of the Committee on Legislation.*

The Secretary: I have received from some of the county secretaries a statement as to the number of practitioners in their counties not enrolled in their list, and also of the number of irregular practitioners. Fourteen out of the twenty counties replied. According to their reports, the number of homeopathic practitioners was five less than that of the number of the regular practitioners not members of the county societies. These reports are evidently not accurate. County secretaries are requested to furnish the State Secretary every year with the names and addresses of homeopaths, eclectics and osteopaths, as well as those of regular physicians not members of the Society.

On motion of Dr. R. C. Newton, the report of the Committee on Legislation was accepted and its suggestions ordered carried out.

Dr. L. M. Halsey introduced for Dr. Kipp a resolution regarding the prescribing of eye-glasses,* which was unanimously adopted.

Dr. W. B. Johnson, of Paterson, the Third Vice-President, presented an essay on "The Organization and Operation of Hospitals and Other Charitable Institutions in the State of New Jersey."*

On motion, it was accepted and ordered printed in the Transactions.

Dr. Talbot R. Chambers, of Jersey City, presented a report on the "Progress in Ophthalmology."*

On motion the report was accepted, and the paper was referred to the Committee on Education, and Dr. Chambers was made a member of that committee.

Dr. Frank V. Cantwell, of Trenton, presented a paper,

All reports, papers, etc., marked thus (*) will be found in the Appendix.

"Operation for Complete Epispadia by Transplantation of the Urethra."*

On motion, it was accepted and referred to the Committee on Publication.

Dr. Alexander McAlister, of Camden, presented a paper on "Infantile Colic."* It was referred to the Committee on Publication. The paper was discussed by Dr. W. E. Darnall, of Atlantic City, and Dr. John C. Johnston, of Blairstown.*

Dr. J. J. Kinyoun, of Glenolden, Pa., read a paper on "Mosquitoes and Malaria," which he illustrated by numerous plates.*

The paper was discussed by Dr. Judson Daland, of Philadelphia, Dr. Evans, Dr. C. P. Noble, of Philadelphia, Dr. Treganowan, of South Amboy, Dr. Marcy, Dr. E. B. Silvers, of Rahway, Dr. Armstrong, of Rutherford. Dr. Kinyoun closed the discussion.*

On motion of Dr. Armstrong, seconded by Dr. Marcy, it was unanimously voted that a committee be appointed, consisting of one member from each District Society, to take up the study of mosquitoes and malaria and report at the next annual meeting.

On motion, adjourned at 1 P. M.

AFTERNOON SESSION.

The Society reconvened at the call of the President at 3.20 P. M.

The President announced the appointment of the Committee on Mosquitoes and Malaria, as follows:

COMMITTEE ON MOSQUITOES AND MALARIA.

W. B. Stewart, Atlantic; W. A. Davis, Camden; H. G. Miller, Cumberland; Alex. Marcy, Jr., Burlington; Charles Teeter, Essex;

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Randolph Marshall, Cape May; S. E. Armstrong, Bergen, *Temporary Chairman;* H. B. Diverty, Gloucester; L. T. Salmon, Hunterdon; John J. Baumann, Hudson; Cornelius Shepherd, Mercer; John Taylor, Monmouth; D. C. English, Middlesex; B. D. Evans, Morris; Irwin H. Hance, Ocean; A. F. McBride, Passaic; B. W. Ferguson, Sussex; J. P. Hecht, Somerset; Isaac Barker, Warren; B. V. Hedges, Union; B. A. Waddington, Salem.

Dr. H. Genet Taylor presented the report* of the Committee on Honorary Membership.* The committee recommended the election to honorary membership of Dr. Wm. K. Van Reypen, U. S. N., Dr. John Allan Wyeth, of New York, and Dr. Lawrence F. Flick, of Philadelphia, Pa.

On motion, the report was received and the Society proceeded to the election of these gentlemen. It was moved that the Secretary be instructed to cast the ballot of the Society, but the President ruled that, according to the By-Laws this was not legal. Dr. A. K. Baldwin, of Newark, and Dr. W. Blair Stewart, of Atlantic City, were appointed tellers. They reported that 48 ballots had been cast, 4 being blank. Dr. Van Reypen, Dr. J. A. Wyeth and Dr. L. F. Flick, having received a majority of two-thirds, were declared elected.

The resignation of Dr. J. D. McGill, of Jersey City, as permanent delegate from Hudson County, was read, and on motion of Dr. Chandler, was accepted.

Dr. J. N. McCormack, of Kentucky, then spoke as follows:

I should like to preface what I am about to say by telling you that although I am here as the official representative of the American Medical Association, and at the invitation of your Secretary, I am really here purely in an advisory capacity. I am a member of that political party which believes in each State managing its own affairs in its own way. I say this that my position may not be misunderstood.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

I have been informed that there are some members who are not thoroughly advised as to the intention of what is known, in the new plan of organization, as the Council. It is a very simple matter, and the body is an important one in this plan of organization. The intention of this scheme is to divide the State which has been reorganized into councillor districts convenient of access to those having charge of the work of organization in each district. Your county societies are now pretty well organized, but yet there are many members of the profession who have not yet availed themselves of membership in your State, and hence, this system is probably as important to New Jersey as to any other State in the Union. Until you have the entire number of reputable physicians in the State enrolled in your Society, you will not be able to present a solid front in connection with efforts to influence legislation, or for any other purpose. In Alabama, where practically every physician of the State has been for many years a member of the County and State Societies, such an excellent public opinion has existed, that no law relating to medicine or to public health affairs has ever been presented to the General Assembly that has not been matured by the organized medical profession of that State.

It has been proposed to divide your State into five councillor districts. After this year, this Council will be elected, but in order to prevent an inter-regnum, it is proposed that your President shall name the first body of organizers to work for this year alone. It is intended that these gentlemen, after conference with the officials of the county society of any county, shall visit such county for the purpose of assisting them in the work of bringing into the membership those who are yet outside. Perhaps in New Jersey you are not troubled with local jealousies and dissensions, but they certainly exist in many of the other States I have visited, and I have visited nearly every State in the Union. These dissensions have kept a very considerable number of worthy members outside of the county society. The effort of this particular organization, the Council, is to meet that emergency and attempt by co-operation with the county societies to bring these physicians into the membership. In other States it had been found that a physician from an adjoining county or a distant county can accomplish this work better than the physicians of the same county.

I hope I have made this plain to you. These positions are not very

desirable except for active and energetic men, because there is much responsibility and the amount of work is considerable. The actual travelling expenses alone are defrayed by the State Society, and the Councillors receive no compensation. This system is no longer an experiment, and I believe that in the course of one, two or three years we shall be able to bring into the ranks of the organized profession of New Jersey *every* reputable physician who lives within its borders. I shall be glad to answer any question that may be asked.

Dr. Philip Marvel: Following upon what Dr. McCormack has said, I desire to offer the following resolution, prefacing it by saying that in offering this resolution there is no intention of disturbing the present relation with the County Societies; the proposed plan merely embraces a geographical districting for the councillor divisions.

Resolved, That the State be divided into five Councillor Districts as follows:

1st District—The counties of Sussex, Warren, Morris and Essex.

2d District—The counties of Union, Hudson, Bergen and Passaic.

3d District—The counties of Mercer, Middlesex, Somerset and Hunterdon.

4th District—The counties of Camden, Burlington, Ocean and Monmouth.

5th District—The counties of Cape May, Cumberland, Atlantic, Gloucester and Salem.

Resolved, That the retiring President, after consultation with the President-elect, shall appoint five councillors, one for each of the districts named, to serve for one year and until their successors are elected and installed by the House of Delegates in 1904.

Resolved, That for the ensuing year the President and Secretary be authorized to issue charters to component societies applying therefor.

On motion of Dr. R. C. Newton, of Montclair, these resolutions were unanimously adopted.

Dr. Frank M. Donahue, of New Brunswick, read a paper, "Alexander Operation in the Treatment of Retrodisplacements of the Uterus."*

All reports, papers, etc., marked thus (*) will be found in the Appendix.

On motion, the discussion was postponed until after the presentation of the next paper.

Dr. J. M. Baldy, of Philadelphia, read a paper, "Retrodisplacements and Their Treatment."* The papers were discussed by Dr. Mortimer Lampson, Jersey City; Dr. Emery Marvel, Atlantic City; Dr. Philander A. Harris, Paterson; Dr. Charles P. Noble, Philadelphia, and Dr. E. J. Ill, Newark. Dr. Baldy closed the discussion.*

On motion of Dr. McAlister, Dr. J. P. Crozer Griffith was allowed to read his paper at this time. Dr. Griffith's paper was entitled, "Pneumonia Simulating Appendicitis."* It was discussed by Dr. E. W. Hedges, of Plainfield.*

Dr. L. M. Halsey, Chairman of the Committee on Legislation, asked for instruction regarding the recommendations made by the Society, (1) with regard to Dr. Strock's paper, and (2) with regard to fees.

On motion of Dr. C. Shepherd, it was unanimously voted that the request of the Committee to be continued be granted.

Dr. Eliot Gorton, of Fair Oaks, Summit, presented a paper, "Some Practical Methods of Hydrotherapy for General Practice."*

Dr. S. Ziegler, of Philadelphia, read a paper, "Some Disorders of the Eye Due to Nasal Infection."* Discussed by Dr. W. P. Eagleton, of Newark, and Dr. T. R. Chambers, of Jersey City,*

Dr. C. J. Kipp, of Newark, reported "Two Cases of Transient Complete Blindness of Both Eyes."* Discussed by Dr. Frank Fisher, of Philadelphia.*

Dr. T. R. Chambers moved, "That the Society defray the expense of the dinner for those members and guests who had not secured accommodation at the Coleman

All reports, papers, etc., marked thus (*) will be found in the Appendix.

House." Seconded by Dr. Taylor. Dr. Chandler said that the terms of the resolution were somewhat vague and might give rise to discussion; that he was in favor of treating all members alike, whether they were registered at the Coleman House or not, but as the hour was late and the matter required consideration, he moved that it lie on the table until the next morning. Seconded and lost. The motion of Dr. Chambers was then unanimously carried.

Dr. C. J. Kipp moved that the Committee of Arrangements be instructed to carefully note the number of members for which the Society is to be charged for dinners, and see that only those entitled to such privilege shall secure the dinner without cost, as provided for by Dr. Chamber's motion. Seconded by Dr. McAlister and carried. On motion, adjourned at 6 P. M.

THIRD DAY—THURSDAY, JUNE 25TH.

The meeting was called to order by the President at 9.25 A. M.

The report of the Fellows' Prize Committee was prepresented by Dr. D. C. English, as follows:

The Fellows' Committee on Prize Essay report to the Society that only one essay has been presented this year on "Vaccination," which they have not deemed worthy of an award because of its failure to meet the requirements of "originality in investigation and thought," which the Fellows emphasize as essential to a successful competition for the prize offered. The committee regrets exceedingly this result, because the essay presented is an excellent one, showing that a large amount of literary research has marked its preparation.

Dr. English also reported that—

The Fellows have chosen as the subject for next year's essays," The Etiology of Malarial Diseases." The essays should not contain less

than 2,000 nor more than 4,000 words, and must be characterized by originality in investigation and thought, and by clearness and conciseness of expression, and be, in the judgment of the committee, of decided value to the members of the Society and the profession generally. To the first in order of merit will be awarded the prize of one hundred dollars; to the second, that of honorary mention. Further particulars concerning the essays will be published in the Transactions and also sent to the County Societies by the Committee on Prize Essay appointed by the Fellows, Drs. E. L. Godfrey, D. C. English, William Elmer.

On motion of Dr. Chandler, the report was received.

On motion of Dr. C. J. Kipp, the following resolution was adopted:

Resolved, That the committee having charge of the programme for future meetings be directed to give precedence to the papers offered by members of this Society.

On motion of Dr. W. J. Chandler, the following preamble and resolution urging the national incorporation of the American Medical Association was adopted:

WHEREAS, It is the belief of the Medical Society of New Jersey that reincorporation of the American Medical Association under a national charter would elevate the position and increase the dignity of the medical profession of this country, therefore, be it

Resolved, That the American Medical Association be requested to make application through its committee to Congress at its next session for a special charter permitting the Association to hold property and to meet anywhere within the territorial limits of the United States. And be it further

Resolved, That members of the House of Delegates of the American Medical Association representing this Society are hereby instructed to favor and to vote for such national incorporation for the American Medical Association, and the Secretary is hereby instructed to forward copies of these resolutions to the President and Secretary of the American Medical Association, and to the Chairman of the Committee on National Incorporation of the American Medical Association.

The Secretary stated that the following nominees for

Permanent Delegates having presented their certificates were eligible for election:

Dr. R. H. Parsons and Dr. Enoch Hollingshead, of Burlington County; Dr. David Stephens, of Middlesex County; Dr. George H. Franklin, of Mercer County, and Dr. William S. Jones, or Camden County.

Drs. Reading and English were appointed tellers. They reported that 23 ballots had been cast, and that all of the candidates had been unanimously elected.

On motion of Dr. W. J. Chandler, the names of Joseph E. Hurff, of Camden, Dr. W. K. Newton, of Paterson, and Dr. E. E. De Groft, of Woodstown and Daniel Garrison, of Pennsgrove, as nominees for Permanent Delegates, were laid over until the next meeting.

The Secretary read a communication from the Atlantic City Board of Trade inviting the Society to meet in that city. On motion, the communication was received and the Secretary was instructed to answer the communication after the report of the Nominating Committee had been received and acted on.

Dr. N. L. Wilson, of Elizabeth, read a paper on "Acute Inflammation of the Accessory Sinuses of the Nose."*

It was discussed by Dr. T. W. Corwin, of Newark, and Dr. George E. Reading, of Woodbury.

Dr. Edward J. Ill, of Newark, presented "A Clinical Contribution to the Knowledge of Tuberculous Disease of the Female Urinary Tract."* It was discussed by Dr. Horace G. Norton, of Trenton, and Dr. Philip Marvel, of Atlantic City. Dr. Ill closed the discussion.*

On motion, it was ordered that the paper* of Dr. E. A. Y. Schellinger, of Camden, on "Advisibility of Surgical Interference in Abdominal Contusions," be read by title, and that Dr. B. D. Evans' paper be read at this time.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Dr. B. D. Evans, of Morris Plains, read a paper, "Court Testimony of Medical Experts in Mental Diseases."*

These papers were referred to the Committee on Publication under the rules.

Dr. Emery Marvel, of Atlantic City, presented a paper, "Unusual Malformations in the Female Generative Organs,"* together with specimens. It was discussed by Dr. E. J. Ill and Philip Marvel.*

Dr. John C. McCoy, of Paterson, read a paper, "Extensive Fracture of the Skull."*

On motion, Dr. David C. English was given an opportunity to introduce miscellaneous business. He then introduced the following resolution:

WHEREAS, The new Constitution and By-Laws go into effect on the adjournment of this annual session of the Society, and said instruments require the appointment of various committees, which are essential to the proper working of the Society; therefore,

Resolved, That the in-coming President be authorized and empowered to appoint the committees specified in Chapter IX of the new By-Laws at his earliest convenience, and furnish the names of the members appointed by him to serve on these various committees to the Committee on Publication, to be published in the Transactions.†

Dr. George E. Reading: I move the adoption of this resolution.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

† The President subsequently appointed the following committees:

Committee on Credentials—E. W. Hedges, Plainfield; Archibald Mercer, Newark; Alexander Marcy, Jr., Riverton.

Committee on Business—Stephen Pierson, Morristown; J. P. Hecht, Somerville; P. A. Harris, Paterson; D. M. Skinner, Belleville; J. A. Exton, Arlington.

Committee on Honorary Membership—E. J. Marsh, Paterson; L. M. Halsey, Williamstown; H. Genet Taylor, Camden.

Committee on Publication—W. J. Chandler, South Orange; D. C. English, New Brunswick; H. W. Elmer Bridgeton.

Committee on Scientific Work—T. R. Chambers, Jersey City; R. H. Parsons, Mount Holly; N. L. Wilson, Elizabeth.

Committee on Program—W. J. Chandler, South Orange; Alexander McAlister, Camden; W. K. Newton, Paterson.

Committee on Public Hygiene and Legislation—Charles Young, Chairman, Newark; Joseph Tomlinson, Bridgeton; B. A. Waddington, Salem; M. S. Ayres, Fair View; Wm. Elmer, Trenton; C. J. Kipp, Newark.

Dr. Philip Marvel: The By-Laws provide for this.

Dr. English: They do not; they say the President shall provide for vacancies occurring through death or removal from the district.

Dr. Marvel: Section 3, Article IX, says that vacancies occurring through death, resignation and otherwise are to be filled by the President.

Secretary: This motion of Dr. English is not in conflict with the intent and provisions of the By-Laws, but is merely to insure to the in-coming President the authority to make these appointments *ad interim*.

Dr. Reading: These vacancies do not occur in the interim of the meetings, as the By-Laws provide for.

Dr. English: I see no objection to the adoption of the resolution, because if a question arises this resolution disposes of it.

Dr. Paul M. Mecray, Camden: There must be a misunderstanding, for Dr. Philip Marvel's resolution, adopted yesterday, covers this ground.

The Secretary: Dr. Marvel's resolution had reference to the appointment of five Councillors.

The question being called for, the resolution was unanimously adopted.

On motion, Dr. E. Field's paper,* on "Exsection of the Scapula.—Statistics.—Report of Two Cases," in the absence of the author, was read by title.

The next order was the discussion of the question proposed by the Business Committee, *viz.*: "Vaccination. How long does it protect, and how shall it be controlled? What are its sanitary and commercial aspects?"

Dr. George E. Reading, of Woodbury, opened this discussion. Dr. W. U. Selover,* of Rahway, followed.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

The paper presented by Dr. Selover was referred to the Publication Committee under the rules.

Dr. D. T. Bowden, of Paterson, read a paper, "Some Common Deformities and Their Prevention."*

The paper was referred to the Publication Committee under the rules.

Dr. Paul M. Mecray, Chairman of the Nominating Committee, presented the report of this committee as follows:

For President—Henry Mitchell, Asbury Park.

First Vice-President—A. W. Taylor, Beverly.

Second Vice-President—Walter B. Johnson, Paterson.

Third Vice-President—Henry W. Elmer, Bridgeton.

Corresponding Secretary—E. W. Hedges.

Recording Secretary—William J. Chandler.

Treasurer—Archibald Mercer.

Standing Committee—For unexpired term of Dr. Henry W. Elmer, Alexander Marcy, Jr., Riverton. For full term, G. H. Balleray, Paterson; W. H. Ireland, Camden.

Business Committee—Alexander McAllister, *Chairman*, Camden; B. C. Pennington, Atlantic City; E. Hollingshead, Pemberton; Joseph M. Rector, Jersey City; Geo. H. Franklin, Hightstown.

Committee on Honorary Membership—H. Genet Taylor, Camden; Alexander W. Rogers, Paterson; Charles J. Kipp, Newark.

Committee of Arrangements—Theo. Senseman, *Chairman*, Atlantic City; Walter Reynolds, Atlantic City; W. B. Stewart, Atlantic City; W. E. Darnall, Atlantic City; Paul M. Mecray, Camden; Geo. E. Reading, Woodbury; Geo. F. Wilbur, Asbury Park.

Delegates to American Medical Association—Charles J. Kipp, E. J. Marsh.

Alternate—Wm. F. Faison.

Delegates to New York Medical Society—E. B. Silvers, Rahway; D. A. Currie, Englewood; W. J. Chandler, South Orange.

Delegate to New Hampshire Medical Society—Edwin Field, Red Bank; J. G. Ryerson, Boonton; S. O. B. Taylor, Millstone.

Delegates to Connecticut Medical Society—J. A. Exton, Arlington; S. A. Helfer, Hoboken.

All reports, papers, etc., marked thus (*) will be found in the Appendix.

Delegates to Rhode Island Medical Society—A. J. Alexander, Paterson; M. S. Ayres, Fairview.

Delegates to Maryland Medical Society—R. M. Curts, Paterson; W. H. Iszard, Camden; B. D. Evans, Morris Plains.

Delegates to Delaware Medical Society—Charles S. Heritage, Glassboro; E. E. DeGrofft, Woodstown; William A. Davis, Camden.

Delegates to Mississippi Valley Medical Association—Wm. F. Faison, Jersey City; J. T. Gilson, Paterson; Geo. E. Reading, Woodbury.

Delegates to Massachusetts Medical Society—J. A. Exton, Arlington; S. A. Helfer, Hoboken; F. H. Todd, Paterson; W. R. Kinmouth, Farmingdale.

Delegates to the American Pharmaceutical Association—H. L. Coit, Newark; Dr. E. B. Silvers, Rahway.

Delegates to the Pennsylvania Medical Society—Wm. S. Jones, Camden; H. H. Lucas, Paterson; H. H. Wilson, Woodbury; Cornelius Shepherd, Trenton; Daniel Stout, Berlin; J. F. Leavitt, Camden.

Delegate to the North Carolina Medical Society—Dr. Wm. F. Faison, Jersey City.

Atlantic City selected as the place of meeting 1904. Date: Day preceding meeting American Medical Association.

PAUL M. MECRAY,
Chairman Nominating Committee.

H. H. BRINKERHOFF,
Secretary.

Dr. W. B. Johnson, of Paterson, moved that the report of the Nominating Committee, except in so far as the date of holding the meeting, be approved. Seconded by Dr. McAlister and carried.

Dr. Philip Marvel: I move that the Society meet in Atlantic City on Friday, Saturday and Monday, June 3, 4 and 6, 1904. The motion was not seconded, and he subsequently changed it to meet in Atlantic City on June 21, 22 and 23, 1904. Seconded by Dr. C. Shepherd.

Dr. Barker offered as an amendment that the Society meet in Asbury Park. Amendment lost. Original motion carried.

On motion, the Secretary was instructed to cast a ballot for the names presented by the Nominating Committee. The ballot was cast, and they were declared unanimously elected.

Dr. W. B. Johnson: I move that the report of the Nominating Committee with regard to the Committee on Arrangements be approved. Seconded and carried.

On motion of Dr. Chandler, it was voted that the names of Dr. Clark and Dr. Bruyere, as nominees for Permanent Delegates from Mercer County, lie over for one year.

Dr. W. J. Chandler: I move that the custody of the Transactions of the Society, now in the State Library at Trenton, be given to the William Pierson Library Association until otherwise provided for. Seconded by Dr. W. B. Johnson and carried.

On motion, the execution of the provisions of the last motion was referred to the Committee on Publication.

The President announced the appointment of the Councillors as follows:

First District—Thomas W. Harvey, of Orange.
Second District—J. L. Leal, of Paterson.
Third District—Cornelius Shepherd, of Trenton.
Fourth District—Daniel Strock, of Camden.
Fifth District—Philip Marvel, of Atlantic City.

On motion, the Society finally adjourned at 12.30 P. M.

APPENDIX TO THE MINUTES.

TREASURER'S REPORT.

DR. ARCHIBALD MERCER, *Treasurer*, in account with the Medical Society of New Jersey, 1902–1903.

Dr.

June, 1902.	Salem County, Additional Payment for 1902	$1 00	
"	Morris County, Additional Payment for 1902	5 00	
July, 1902.	Essex County, Additional Payment for 1902	1 00	
"	Middlesex County, Additional Payfor 1902	2 00	
"	Dr. A. Fischer, Fee for Diploma	15 00	
June, 1903.	Atlantic Co., Assessment for 1903	47 00	
"	Bergen Co., " "	38 00	
"	Burlington Co., " "	33 00	
"	Camden Co., " "	76 00	
"	Cape May Co., " "	19 00	
"	Cumberland Co., " "	37 00	
"	Essex Co., " "	237 00	
"	Gloucester Co., " "	28 00	
"	Hudson Co., " "	148 00	
"	Hunterdon Co., " "	24 00	
"	Mercer Co., " "	65 00	
"	Middlesex Co., " "	34 00	
"	Monmouth Co., " "	46 00	
"	Morris Co., " "	58 00	
"	Passaic Co., " "	81 00	
"	Salem Co., " "	18 00	
"	Somerset Co., " "	25 00	
"	Sussex Co., " "	20 00	
"	Union Co., " "	69 00	
"	Warren Co., " "	21 00	
			$1,148 00
Interest on U. S. Bonds			102 00
To Cash Balance in Bank, June, 1902			2,553 03
" U. S. Registered 4% Bonds			2,550 00
			$6,353 03

Cr.

June, 1902.	Dr. William J. Chandler, Rec. Sec'y	$65 52	
"	Dr. H. W. Elmer, Chairman Standing Committee	16 75	
"	Dr. E. W. Hedges, Cor. Secretary.	14 50	
"	Dr. Archibald Mercer, Treasurer..	17 36	
"	Dr. G. E. Reading, National Legislation Committee	10 85	
"	Dr. H. W. Elmer, Tuberculosis Sanatorium Committee	121 65	
"	Dr. L. M. Halsey, Legislation Com.	1 00	
"	Dr. H. W. Elmer, Tuberculosis Sanatorium Committee	15 00	
"	The Whitehead & Hoag Co.	40 00	
"	Orange Chronicle Co.	43 80	
July, 1902.	Dr. O. C. Ludlow, Stenographer...	65 00	
"	Dr. H. W. Elmer, Tuberculosis Sanatorium Committee	5 35	
"	Orange Chronicle Co.	29 25	
Sept., 1902.	L. J. Hardham, on acct. of Transactions	350 00	
Oct., 1902.	Dr. W. J. Chandler, Rec. Secretary	159 00	
"	L. J. Hardham, Printing	10 75	
"	L. J. Hardham, Balance for Transactions	454 00	
Dec., 1902.	Dr. P. Marvel, Chairman Committee on Revision of Constitution and By-Laws	98 70	
Mch., 1903.	Dr. W. J. Chandler, Rec. Secretary	60 00	
			$1,578 48
June, 1903.	By Balance in Bank, June 20, 1903..		2.224 55
"	" U. S. Registered 4% Bonds.....		2.550 00
			$6.353 03

REPORT OF THE RECORDING SECRETARY.

To those of you who have cherished the interests and watched the growth of this Society for many years, it will be a source of gratification to know that we have now on the rolls of our County Societies a total of 1,122 names. Last year we had 1,061, thus showing a net increase of 61. Four counties come to us with a smaller number

than that of last year—a total loss of 9. One county reports the same number, and fifteen counties show gains of from one to twelve each—a total gain of 70. The largest gain and the largest percentage of gain was made in Camden County, which now has a membership of 75.

From the reports of some of the counties, it is evident that many regular physicians are settled and practicing in our midst who are not (and some never have been) members of any District Medical Society. Whose fault is this? If they are reputable physicians, they ought to be invited to join the only recognized medical organization of this Society in their county. If the County Society does not offer inducements enough to stimulate every medical man therein to desire to become a member, then that County Society is not doing its bounden duty. It is slothful, or it is stupidly dull. It does not realize the duties and the dangers of the hour. The hosts of quackery in protean forms are ever on the alert and are stealing advantages at every opportunity. These opportunities arise too often from professional jealousies and the want of organized effort. Nothing will so efficiently overcome the one and make potent the other as an active, genial, competent and scientifically working County Society. See to it, then, that next year there is not a regular physician of good standing in your county who has not been invited, urged—yes, persuaded, to become a sharer with you in the benefits of the District Medical Society.

We began this year with the names of 117 Permanent Delegates on our lists. Two have died—Dr. Theodore H. Boyeson, of Egg Harbor City, Atlantic County, and Dr. Arthur Ward, of Newark, Essex County—leaving us at the present time a total membership of 115. There were dropped for absences at the last annual meeting five names. This being the appointed year for the triennial selection of nominees for Permanent Delegates, there have been selected as such nominees and to fill the vacancies occasioned by death and delinquencies, 31 candidates from 14 counties. Six counties make no nominations. The list of these nominees is as follows:

NOMINEES FOR PERMANENT DELEGATES.

Atlantic County—E. A. Reilly, Atlantic City; W. E. Darnall, Atlantic City; J. A. Joy, Atlantic City (to fill vacancy).

Burlington County—Enoch Hollingshead, Pemberton.

Camden County - Alexander McAlister, Camden (to fill vacancy); Joseph E. Hurff, Blackwood; William S. Jones, Camden; Harry H. Sherk, Camden.

Cape May County—Randolph Marshall, Tuckahoe.

Cumberland County—W. L. Newell, Millville; J. C. Applegate, Bridgeton.

Essex County—Henry L. Coit, Newark; Theodore W. Corwin, Newark; John H. Bradshaw, Orange; David E. English, Milburn; Richard G. P. Dieffenbach, Newark; George B. Philhower, Nutley; Edward Staehlin, Newark; Livingston S. Hinckley, Newark; Richard P. Francis, Montclair.

Gloucester County—Eugene Oliphant, Bridgeport.

Middlesex County—David Stephens, New Brunswick.

Morris County—A. A. Lewis, Morristown.

Passaic County—Wm. K. Newton, Paterson.

Salem County—E. E. DeGrofft, Woodstown (to fill vacancy); Daniel Garrison, Pennsgrove.

Sussex County—H. D. Van Gaasbeck, Sussex (to fill vacancy); E. Morrison, Newton.

Union County—T. N. McLean, Elizabeth.

Warren County—G. W. Cummins, Belvidere.

Bergen, *Hudson*, *Hunterdon*, *Monmouth* and *Somerset* make no nominations.

Mercer makes no report.

Two Permanent Delegates—Dr. Alexander Marcy, of Riverton, Camden County, and Dr. A. W. Taylor, of Beverly, Burlington County—present their resignations to the Society at this meeting.

The following have been absent from two successive annual meetings: David St. John, Hackensack, Bergen County; N. Newlin Stokes, Moorestown, Burlington County; L. E. Hollister, Newark, Essex County; M. A. Mackintosh, Paterson, Passaic County; E. Morrison, Newton, Sussex County; Alva C. Van Syckle, Hackettstown, Warren County.

The excuses of Drs. St. John, Hollister and Mackintosh were accepted and their names are retained.

The excuses of Drs. Stokes, Morrison and Van Syckle were not satisfactory and their names are dropped from the roll. The vacancies thus created can be filled after the Secretaries of the respective County Societies have received official notification from the Recording Secretary of the Medical Society of New Jersey.

The question is often asked, "How many attend the meetings of our Society?" There were present last year, according to the Regis-

tration Book, 219 members, as follows: Fellows, 11; Officers and Standing Committee, 12; Permanent Delegates, 72; Annual Delegates and Corresponding Members, 124.

It is a great pleasure to be privileged to announce to you that we have with us to-day representatives of every one of the twenty-one counties of this State. We welcome here to-day for the first time in many years representatives from Ocean County. This District Society has been for a long period in a state of suspended animation. It is now aroused, and taken hold of by men who wish to make it a live Society, and who will enter into their work with ability and determination. Let us hope that their efforts will be pre-eminently successful, and that they will send to us every year an influential and progressive delegation.

Among the many important subjects to be presented to your consideration at this meeting there is none of more importance than the revision of the By-Laws. Our present By-Laws have been several times amended; resolutions have been passed from time to time. Some have been repealed and some are still in force, so that it is impossible for any one not thoroughly conversant with the proceedings of the Society for the past ten years to make a positive ruling on a disputed point. Some revision and codification of these laws is, therefore, necessary. The American Medical Association has adopted a new constitution and by-laws, involving many changes in its methods, and has suggested a plan of organization which it wishes the State societies to adopt, with such modification as may seem to each one to be necessary. It is certainly desirable for us to adopt rules in harmony with these general principles, and to make such other changes in our present laws as may be consistent with the desires of the American Medical Association and compatible with our venerable traditions. In such matters it is well to make haste slowly. We have, therefore, held the report of the Revision Committee of last year over until this year. We have sent a copy of the proposed new By-Laws to every member of every County Society in the State, in the hope that the matter might be thoroughly and calmly considered, and a decision on the various changes obtained without unnecessary delay. Some alterations should be made at this session; as, for instance, to make every member of a County Society in some way also a member of the State Society. Otherwise we shall be compelled to reduce our representation in the American Medical Association from three delegates to one.

The time of holding the annual meetings of the various County Societies varies very greatly. One holds its meeting in January; one in February; eight hold theirs in April; nine have fixed on May, and one waits until the first Tuesday in June. This want of uniformity may seem at first thought to be a trivial matter. While it may not be as objectionable to hold the meetings early in the season, it is quite so to hold them late. The County Secretary cannot send in his returns until after the annual meeting. These returns pass to your Recording Secretary and form the basis of the mailing list, furnish data for the programme, and, after careful comparison and correction, are printed in the Transactions. All this consumes much time and involves considerable correspondence. The programme ought to be ready for the printer by the middle of May, and in order to do this the annual meeting should be held not later than the middle of April. Many of the County Secretaries are busy medical men, and have not always time to immediately revise and forward the returns. And in some instances it seems that the pressure of other cares is great enough to entirely crowd this matter out of their minds, and their returns come in just too late to admit of publication in the programme. I call attention to this subject at this time for the reason that if changes are made in the By-Laws of this Society it may involve the changing of by-laws in several of the County Societies, and at that time the advisability of holding the annual meetings earlier could be considered.

The equipment of the Secretary's office has been rendered quite complete by the purchase of a typewriter, a duplicator and a letter press. These instruments lighten the labor and perfect the work of the office. It is now possible to transact with greater promptness the business of the Society, and to preserve exact and legible copies of all communications sent out.

I cannot close this report without acknowledging my indebtedness to the County Secretaries and to the other members of this Society for their valuable assistance in answering the various inquiries made of them during the past year. This is a great help to your Secretary, the success of whose labors is so largely dependent on their aid.

It is a matter for congratulation that for so many years this spirit of helpfulness and good will has prevailed so generally throughout our Society. Our meetings are especially characterized by sociability and friendliness. They are looked forward to by some as *the* occa-

sion of the season. To those of us who have met thus for so many successive years, they stand as milestones along the pathway of our medical lives. Each one as it recurs brings us nearer to a complete understanding of one another, strengthens the ties of personal friendship, and begets a love for our professional brethren and for that humanity which we serve akin to that of the Great Physician.

Respectfully submitted,

WM. J. CHANDLER, *Rec. Sec'y.*

REPORT OF THE CORRESPONDING SECRETARY.

June 23, 1903.

To the Medical Society of New Jersey:

The Corresponding Secretary respectfully reports that he has attended to the duties devolving upon him during the past year.

Copies of our Transactions have been sent to all of the State societies, to many of the national societies, to some foreign societies and to many public libraries. In return, we have received Transactions from the following State societies: West Virginia, Massachusetts, Mississippi, Missouri, Maryland, Wisconsin, Indiana, Tennessee, New Hampshire, Arkansas, Alabama, Connecticut, Nebraska, Vermont, Texas and New York.

The Recording Secretary, Dr. Chandler, has on hand about one thousand volumes of the Transactions of different years in the past. Copies of these are frequently asked for by public libraries and by individuals to add to a library or to complete a set. There are no complete sets in this collection. If any members of the Society have back numbers which are of no use to them, they could, by sending them to Dr. Chandler, add to this stock and put their books where they might be of great service.

Pursuant to the By-Laws, your Secretary notified the county societies of Hunterdon, Mercer, Middlesex, Monmouth and Morris of their privilege of each selecting a member to read a paper at this meeting of the State Society, and all but one are represented on our programme.

ELLIS W. HEDGES,

Corresponding Secretary.

REPORT OF THE COMMITTEE OF ARRANGEMENTS.

To the Medical Society of New Jersey:

As this is the seventh time the Society has met in Asbury Park or vicinity, I shall not call your attention to the advantages of Asbury Park as a convention city. Your committee chose the Coleman House as the place of meeting, and through the courtesy of the management of the hotel, places at your disposal the ball room, committee rooms and the rooms occupied by the exhibitors. A general rate was secured of three dollars per day, rooms with bath four dollars. In accordance with a motion passed last year, your committee has made every effort to secure suitable badges at the price specified. We have been in communication with different firms supplying these badges, and failed to secure suitable badges at the price specified. After exhausting every means to comply with this motion, a contract was closed with the Whitehead & Hoag Company to supply 250 in bronze and 150 in oxidized silver for fifty-five dollars. There have been forty-seven spaces taken by the exhibitors. This is very much in excess of any previous exhibit. The price per space was fixed at five dollars, placing $235 in the hands of the committee to defray its expenses. A new feature introduced this year was the sending of a formal invitation to each member and a number of the local residents, calling their attention to the social functions occurring during the meeting. The annual dinner will take place Wednesday evening, June 24th, at seven o'clock. This will not be the regular dinner, but one specially prepared for the members of the Society and their guests. To members registering at this hotel there will be no extra charge for the dinner, but other members will register at the office and pay the usual charge for dinner.

During the evening D. M. Skinner, M. D., will respond to "Our Society;" D. C. English, M. D., "Our Fellows;" W. B. Johnson, M. D., "Our Vice-Presidents;" T. R. Chambers, M. D., "Our Specialties;" Cyrus F. Brackett, M. D., LL. D., "Our Honorary Members;" and the Hon. George Wurts, "The Physician as a Citizen." After the dinner a reception will be given in this room. Members are requested to wear the buttons which have been distributed, that they may be recognized and admitted. The expenditures of the committee will be less than the amount received from the exhibitors, but at this time it is impossible to give a detailed report, which will be forwarded at a later date.

Respectfully submitted,

JOHN TAYLOR, M. D.,

Chairman Committee of Arrangements.

REPORT OF THE COMMITTEE ON BUSINESS.

Mr. President and Members of the Medical Society of New Jersey:

The Committee on Business present the printed program for order of exercise of this, the one hundred and thirty-seventh annual meeting of the Society.

The Wednesday evening literary session will be omitted, the Committee of Arrangements having provided social enjoyment for that occasion. The Business Committee would suggest that in the future more entertainment be provided for the ladies; this will ensure a larger attendance of Doctors than in the past.

The Business Committee would recommend that the time limit be rigidly enforced in the discussion and reading of papers, and for all matters of business. Questions incident to the progress of the meeting should not exceed the same, as the program is a lengthy one. The following paper came in too late to be placed on the program:

"Deformity and Its Prevention," Dr. D. T. Bowden, Paterson, N. J.

The committee would request that members connected with hospitals and institutions throughout the State would present pathological specimens, new instruments and apparatus; the members in the past having given this very little attention. This recommendation, if carried out, would add much scientific interest to the sessions. For this meeting the committee have selected two or more members to open the discussion on each paper, which we earnestly hope will promote a more general discussion of each subject. This feature of the program we would recommend for future meetings; also, that members presenting papers in the future select members to open the discussion on said papers. This would aid the Business Committee very materially in arranging the program.

The question selected by the Business Committee last year for discussion at this meeting is a practical one: "Vaccination. How Long Does It Protect? How Shall It Be Controlled? What Are Its Sanitary and Commercial Aspects?" We hope there will be a general discussion.

Regarding a subject for discussion next year, the Business Committee recommend that it be not selected before March, 1904.

The Business Committee desire to thank the members who have so kindly consented to contribute papers at this meeting, and we would urge each individual member to do more scientific work, so that at

future meetings we may have a more liberal response in the presentation of voluntary contributions, reports of interesting cases, preparation of pathological specimens or exhibitions of new instruments and apparatus, and thus more fully meet the scientific requirements of the Medical Society of New Jersey.

Respectfully submitted,

ALEXANDER MCALISTER, *Chairman*,
G. H. FRANKLIN,
B. C. PENNINGTON,
E. HOLLINGSHEAD.

June 23, 1903.

REPORT OF COMMITTEE ON HONORARY MEMBERSHIP.

To the Medical Society of New Jersey:

The Committee on Honorary Membership would respectfully report that the names of Dr. William K. Van Reypen, U. S. N., of New Jersey, Dr. John A. Wyeth, of New York, and Dr. Lawrence N. Flick, of Pennsylvania, were proposed at the last Annual Meeting of the Society for Honorary Membership and referred to this committee.

REAR ADMIRAL WILLIAM K. VAN REYPEN, M. D., U. S. N.

Dr. William Knickerbocker Van Reypen was born at Bergen, New Jersey, November 14th, 1840. He attended public and private schools in Bergen, and at the age of fourteen entered the Sophomore class at the University of New York, from which institution he graduated in 1858. Soon after graduation he commenced the study of medicine at the University Medical College of New York and became a private student of Dr. Alfred C. Post, the then Professor of Surgery at the College. In his second year he received the prize for anatomical dissection and for the best clinical record. He was also appointed Junior Interne at the New York Hospital. In April, 1861, while yet a medical student, he was appointed Assistant Surgeon of the 2d New Jersey Militia, and served with that Regiment during the War of the Rebellion until it was mustered out in August, 1861. In December, 1861, before graduation, he entered the Navy as Assistant Surgeon in the regular service. He graduated in Medicine in 1862, and in 1864 received the degree of A. M. from the New York University. In March, 1862, he was assigned to duty at the Naval Hospital, New

York, where he remained until September of that year, when he was ordered to Key West in charge of the Marine Hospital at that place. The Hospital was then being used by the Navy as a Yellow Fever Hospital; at the time of his arrival, there were fifty-six cases of Yellow Fever in the Hospital; the medical officer in charge having just died. In ten days he was attacked by the fever, from which he had a slow recovery. He remained on duty at the Hospital until December, 1864, passing through another severe epidemic of Yellow Fever during the latter year. He was promoted to Past Assistant Surgeon in 1865; to Surgeon in 1868; to Medical Inspector in 1887; to Medical Director in 1895, and was appointed Surgeon General of the Navy in October, 1897, being reappointed in 1901, and voluntarily retired after more than forty years' service with the rank of Senior Rear Admiral, on January 25th, 1902.

During his naval career he was Fleet Surgeon of the Pacific-North Atlantic and Squadron of Naval Review; served nearly nine years as Assistant to the Bureau of Medicine and Surgery, and was on duty at many of the Naval Hospitals. He was sent by the Department as a Delegate to the International Medical Congress at Moscow in 1897, and read a paper on "The Care of Wounded in Naval Engagements," presenting a plan of an ambulance ship that he had devised. Soon after his appointment as Surgeon General, War with Spain commenced, and he designed and fitted out the ambulance ship "Solace," which vessel was the first of her kind of any nation. Her service during the Spanish War has become historical. Following his retirement he was appointed by the Department of State a delegate to represent the Government at the Red Cross Conference in St. Petersburg in May, 1902.

He is a member of the Holland Society of New York: Ex-Senior Vice Commander of the District of Columbia Commandery, Military Order of the Loyal Legion of the United States; a member of the Sons of the American Revolution; the Geographical Society; the University Club of New York; the Metropolitan Club of Washington, and an honorary life member of the Carlton Club of Brooklyn.

PROFESSOR JOHN A. WYETH, M. D., LL.D.

Dr. Wyeth was born in Marshall County, Alabama, on the 26th of May, 1845, and is the son of Louis Wyeth, lawyer and judge of one of the judicial districts of Alabama. His grandfather was a farmer

and private in Captain Samuel Thatcher's Company of the Massachusetts Militia, which attacked the British and drove them into Boston on the retreat from Lexington on April 19th, 1775. In Paige's history of Cambridge it is stated that there were five Wyeths who marched to the alarm. The founder of this branch of the family in America was Nicholas Wyeth, or Wythe, as the name is sometimes spelled in the middle of the seventeenth century, with that singular indifference of our ancestors as to the way in which their names were spelled. Dr. Wyeth's mother was Euphemia Allan, the daughter of a Presbyterian minister who settled in Tennessee, having emigrated from England. He afterwards removed to Huntsville, Alabama.

Dr. Wyeth was educated first in the common school at Guntersville, Alabama, and for a year at the Military Academy at Lagrange, Alabama. He served as a private soldier in the Confederate Army, was distinguished for gallantry, and was unfortunate enough to be a prisoner of war for a long time, but he has very grateful remembrance of one of our profession, Dr. Charles J. Kipp, of Newark, who, while Dr. Wyeth was imprisoned in Camp Morton, Indiana, and dangerously ill with pneumonia, gave him tender care and consideration, Dr. Kipp being the chief physician to the Military Hospital. Dr. Wyeth was then only 18 years of age. He was very slight, and he attributes some of the tenderness of the Union physician to his apparently helpless condition, for he was a very young and a very sick soldier.

Dr. Wyeth commenced the study of medicine in 1867, and was graduated at the University of Louisville in 1869, took the Adeundem degree in the Bellevue Hospital Medical College in 1873, in which year he was appointed assistant demonstator of anatomy and prosector to the chair of anatomy in 1874. He was awarded the Alumni Association prize in 1876 " for the best essay on any subject connected with surgery or surgical pathology," his subject being " Amputations at the Ankle Joint." Dr. Wyeth also won the first prize of the American Medical Association in 1878, for an Essay on " The Surgical Anatomy and Surgery of the Common, External and Internal Caroted Arteries." He was appointed surgeon to Mt. Sinai Hospital in 1880.

One of Dr. Wyeth's achievements was the establishment of the New York Polyclinic, which may be easily said to owe its existence and its continuous success as a great school for practitioners of medicine chiefly to his efforts. Although surrounded by many distinguished and excellent teachers, Dr. Wyeth, in executive capacity, is

facile princeps, while he is also a surgeon of more than ordinary ability. Dr. Wyeth has written as follows: "A Text Book on Surgery" (1886), "Bloodless Amputation at the Hip Joint" (1890), "Osteo-Plastic Operation for Correction of Deformities of the Nose and Palate" 1892; an historical sketch entitled "The Struggle for Oregon," in Harper's Magazine (1892), and a considerable number of contributions to various scientific productions. He was twice President of the New York Pathological Society, and in 1893 First Vice-President of the American Medical Association. In 1898 he published the "Life of Lieutenant General Nathan B. Forrest," (Harper Bros.) In 1900 he was elected President of the New York State Medical Association, and in 1901 was made President of the American Medical Association. The same year (1901) he received the Degree of Doctor of Laws from the University of his native State, Alabama. Dr. Wyeth is also consulting Surgeon to the Long Branch Hospital, and lives there four months every year.

In 1886 he was married to Florence Nightingale Sims, daughter of the eminent surgeon, the late J. Marion Sims.

LAWRENCE F. FLICK, M. D.

Dr. Flick was born August 10th, 1856, in Carroll Township, Cambria Co., Pa. His father and mother were pioneers of the mountain region of Cambria County. He received his preliminary education in the township school, with occasionally a few months in a subscription school. At the age of thirteen he was sent to the Benedictine College near Latrobe, Pa., where he attended four years and a half. He left College before taking his degree because of ill health. He graduated in medicine at Jefferson College, Philadelphia, in 1879.

The titles of papers which he has read and subsequently published are: "The Hygiene of Phthisis," 1888; "The Contagiousness of Phthisis," 1888; "A Review of the Cases of Tuberculosis which Terminated in Death in the Fifth Ward of the City of Philadelphia During the Year 1888," 1889; "How to Care for the Lungs," 1889; "The Mode of Entrance of the Bacillus Tuberculosis into the System," 1889; "The Treatment of Tuberculosis," 1890; "Special Hospitals for the Treatment of Tuberculosis," 1890; "The Prevention of Tuberculosis, a Century's Experience in Italy Under the Influence of the Laws of the Kingdom of Naples Enacted in 1782," 1890; "Some New Points in the Treatment of Tuberculosis," 1891; "A

Further Report of the Treatment of Tuberculosis by Iodoform Unctions," 1892; "The Influence of the Doctrine of Contagion Upon the Death Rate from Tuberculosis in the City of Philadelphia," 1892; "Practical Measures in the Prevention of Tuberculosis," 1893; "The Funeral Director as a Factor in the Prevention of Disease," 1894; "Prophylaxis in the Treatment of Tuberculosis," 1894; "The Control of Tuberculosis," 1896; "Contagiousness of Tuberculosis," 1897; "Consumption, its Nature, History, Cause and Prevention," 1897; "Nitro-glycerine as a Hemostatic in Hemoptysis," 1898; "Immunity the Fundamental Principle Underlying all Treatment of Tuberculosis," 1898; "The Treatment of Tuberculosis," 1899; "Contagion, its Meaning and its Limitations," 1899; "Immunity as Against Heredity in Tuberculosis," 1899; "The Therapeutics of Tuberculosis," 1900; "Registration of Tuberculosis," 1901; "Public Control of Tuberculosis," 1901; "Home Treatment of Tuberculosis," 1901; "Primary Abdominal Tuberculosis," 1901; "The Implantation of the Tubercle Bacillus," 1902; "Differential Diagnosis Between Tuberculosis of the Lungs and Diseases which Resemble It," 1903.

In consideration of the distinguished medical careers during their life work in the medical profession, as embraced in this report, your Committee take pleasure in recommending Drs. William K. Van Reypen, John A. Wyeth and Lawrence F. Flick as Honorary Members of this Society.

H. GENET TAYLOR.
CHARLES J. KIPP.
ALEX. W. ROGERS.

REPORT OF THE COMMITTEE ON ABUSE OF MEDICAL CHARITY.

Your Committee on Abuse of Medical Charity, in lieu of a bill for legislative action, begs leave to present conclusions which it has arrived at after careful consideration and personal investigations made into the management of some of the larger institutions in this country and abroad. We are convinced that it would be difficult for us to secure satisfactory legislative action on account of the indifference of legislators or else their fear of seeming to antagonize the so-called "poorer masses."

Supposing that legislation could be brought about, there is probability that the matter would drift into the realm of politics and thus in a great measure defeat the desired object. One member of your committee during the last year visited a large number of European Dispensaries and Clinics, and always with the hope of finding some practical method employed for the exclusion of unworthy applicants. In a few only was there any efficient means used to accomplish this object. In London, and notably in the London General Hospital and St. Bartholomew's, a form of home visitation has been resorted to which has seemed to render fairly good results. Practically the same plan has been adopted by the Newark Charitable Eye and Ear Infirmary, in Newark, and in a lesser degree by some of the other institutions of the State.

The exclusion of impostors from the free dispensaries and clinics, in the opinion of the committee, can, in all probability, best be secured by some plan like this. Each large institution, or several smaller ones combined, might employ a "house visitor" to investigate the pecuniary circumstances, as far as possible, of all suspicious applicants, a list of such suspects being furnished the visitor by each institution.

This would presuppose the co-operation of the management of these charities. But we must not lose sight of the fact that many institutions with dispensaries attached are not anxious for the protection we propose to give them, and, in fact, object for obvious reasons. They do not view this evil in the same light as the medical profession, and it may take a long time to educate them up to its full appreciation, but it will come before long. Primarily, the members of our own profession are to be benefited by remedying the present abuse of medical charity. Granting this to be true, why should they not be the ones to take the initial step.

Your committee would respectfully suggest the propriety of the State Society recommending to the District Medical Societies, especially those embracing the larger cities, in which the abuse chiefly exists, to take some practical steps to secure themselves the protection they desire. This undoubtedly could be done by one, possibly two visitors, and would entail a moderate outlay "per capita" on the part of the membership of our District Societies; but if the abuse in question is what we believe it to be, the expense would be well repaid, especially to the younger members. At any rate, such a step would advance the question from the province of theory to practice. It would

need no special preliminary legislation and would show a commendable professional spirit and determination to deal practically and sensibly with our problem. Should legislation then be required to enlarge the scope of the work, the results of such a plan would serve as a practical guide.

T. Y. SUTPHEN.
G. H. BALLERAY.
F. D. GRAY.
J. D. BAER.
Committee.

RESOLUTIONS AND REMARKS ON LICENSING OPTICIANS TO ADAPT GLASSES.

CHARLES J. KIPP.

WHEREAS, Attempts have been made in the past, and will doubtless be made again, to enact a law by which persons not licensed physicians are recognized as competent to adapt glasses to the eye and are authorized by the State to practice this art, and

WHEREAS, We regard the enactment of such laws as detrimental to the welfare of the people for the reasons below given; be it

Resolved, That the Legislative Committee be and are hereby instructed to use, in the name of this Society, every honorable means to prevent such a bill from becoming a law.

The reasons for this action are so ably stated by Dr. C. A. Oliver in "The System of the Diseases of the Eye" that we copy them.

"The science of prescribing for ametropia (eyes out of focus) is not, as has been so widely supposed, a mere mechanical art, similar to the fitting of gloves and the measuring for boots. It is the work of the educated physician, who, understanding the significance of eye-strain, its bearing on the general health, and its proper medical treatment, is able to care for the case. It is he who should be the one to decide for the patient. It is he who is the one upon whom responsibility for the individual not only rests, but who exerts also a far-reaching influence upon men at large and their actions.

"In its treatment the eye should not be considered as a mere mathematical or geometric contrivance governed by optical laws that necessitate mechanical adaptation of focusing materials similar to those

used in the various instruments of optical precision. The visual apparatus must be thought of as one of the physical structures of the entire organism, and subject to the same laws of physiologic action and disease as any other organ in the economy. The visual bulb is an end organ, and not simply an optical contrivance, like a microscope or a telescope, to look through. It is a living mechanism wherein rays of light are changed into a physical material that is capable of being evolved into perceivable matter. The popular comparison of the eye to a camera is erroneous and harmful.

"The difficult or impaired vision that the patient comes complaining of is but one of many symptoms—the most prominent subjective one—that constitutes the signs of the disorder; so that in the treatment of the condition optical correction becomes but a part of the thereapy, and should be ordered only by the competent medical man; not competent merely in the sense of being one who possesses a medical diploma, but competent in the fact of having had a broad medical education and sufficient knowledge of diseases of the visual apparatus to treat them understandingly."

Report of the Committee on Legislation.

Your Committee on Legislation begs leave to make the following report:

We feel that we can not better begin this report than with an extract from what was presented to your body by this Committee one year ago—that medical men in the past have been negligent of their duties political. The members of this Society who took any part during the last session of the Legislature in attempting to shape legislation or prevent the enactment of vicious measures, are thoroughly convinced that the time has arrived that we, as a State organization, should be cognizant of and take an active interest in all matters coming before the Legislature of a medical or sanitary nature.

It has become absolutely necessary that there should be legislative organization in the State Society, and this should extend to each District Society; and if there is hearty co-operation of the officers of the State Society and of the several District Societies, we feel that when the medical profession is a unit, it will be a comparatively easy matter

to readily dispose of vicious bills that are introduced into the Legislature, as well as to secure the passage of healthy legislation, which will be a benefit to the State at large.

There has been no time since the Chairman of this Committee has been connected with legislative matters which were vital to this Society at which there have been so many vicious bills introduced into the Legislature as during the past year.

The bill which was fathered by the undertakers, giving them the power to disinfect houses, look after the sanitary conditions, and the right to issue permits for the interment of the dead; the Optometery bill, practically giving unlimited rights to a class to examine eyes and fit glasses, are examples of measures introduced at the last session of the Legislature.

Your Committee met in December last in Philadelphia, at which time there were present Drs. Strock, Leal and your Chairman. Following your instructions at the last session of this Society to prepare a bill to be introduced in the Legislature embodying Dr. Strock's ideas for the protection of the physician on the witness stand, we had a bill carefully drawn by an able lawyer, and early in the session it was introduced by the member from Gloucester County. After much hard work with the Committee, notwithstanding that there was a great deal of opposition to the bill, and after your Committee had agreed to certain amendments which the opposition in the House said would be acceptable to them, it was favorably reported by the Committee to the House. Here it hung fire for a long time, but was finally defeated in the House toward the close of the session. The members who opposed it gave as their excuse that it would practically preclude them as lawyers from obtaining valuable evidence in divorce cases. We feel that if there had been hearty co-operation of the District Medical Societies in which the respective members of the Legislature had been interviewed, and the measure explained to them, we would probably have passed it. But an opening has been made, and if it should be the desire of the State Society, it is possible to have the matter re-introduced at the coming session of the Legislature, when, with good work upon the part of us all, we believe that it will become a law.

The Undertakers' and Optometery bills were disposed of in Committee, largely, we believe, through the exertions of your Committee on Legislation.

The most serious matter coming to our attention was the bill to license Osteopaths. After having obtained a hearing before the Committee on Public Health, we called together prominent physicians from all over the State to assist us to squelch this species of quackery. The President of our Society, Dr. Godfrey, made an able argument against the bill, taking up principally the legal side of the question. He was followed by Drs. Robert T. Morris and Frank Van Fleet of the Medical Society of New York, who kindly came to our assistance and rendered us valuable aid. These gentlemen carefully analyzed Osteopathy, showing that it was nothing new; simply a form of massage and manipulation employed by all progressive medical men in selected cases; that if this bill became a law it would allow persons who claimed ability to treat diseases by peculiar methods to evade the medical laws, and place a premium on ignorance; that it is certainly not the part of wisdom to legalize certain peculiar methods of treating diseases, and restricting doctors to the practice of them. No intelligent and educated physician would feel that he could conscientiously practice his profession unless allowed to use his judgment as to the method he employed. No two cases of the same disease are exactly alike; peculiarities arise sometimes and require modifications of treatment. It is not possible for the State to discriminate between methods of treatment. The best that the State can do is to insist that all people who treat diseases shall demonstrate to an impartial board that they are competent to diagnose diseases, and are familiar with the known methods of treatment. The State laws leave the application of the particular method of the particular disease to the discretion of the physician. If an exception is made in favor of these so-called Osteopaths, an invitation is given to charlatans of all sorts to come in and ask similar privileges. This is not only not in the interest of the people of the State of New Jersey, but it is an unjust discrimination against the medical profession of the State, which, whatever its faults may be, is made up of men and women who are peers of any in the land, and whose ability is limited only by the discoveries of scientific knowledge.

Several other members of our State Society made able pleas against the passage of this bill, and we were assisted by our homeopathic brethren. The President of the New Jersey State Homeopathic Medical Association made a strong argument against the passage of this measure, and claimed that these men should come under the general medical law, and should not be permitted to practice as a special class.

The Ostespaths were represented by a number of their followers, and their spokesman made a very rambling argument in support of the measure; his plea was largely the citation of cases in which Osteopathy had done so much after the failure of regular physicians. This bill was disposed of in Committee, never having been reported to the Senate. But in the judgment of your Committee, they will undoubtedly try again at future sessions of the Legislature, and it will be necessary for us to make a campaign of education against this measure. It is sometimes a difficult matter to convince members of the Legislature that any class of charlatans should not have the right to practice medicine even under an assumed name; and we must be very alert to stamp out this quackery, as it would only be an entering wedge for numerous others of the same class.

Your Committee assisted in passing the bill to raise the medical standard in the State, which now places us practically on a par with the requirements of the State of New York.

Your Chairman sent out letters to all the District Societies, calling their attention to the resolution passed at the last meeting of the State Society, instructing the Chairman of the Committee on Legislation to correspond with the several District Medical Societies and obtain a concensus of opinion as regards the fees for the examination of lunatics, for conducting post-mortems, and as witnesses at coroner's investigations. Also, to obtain, if possible, the number of irregular practitioners throughout the State, and the number of regular practitioners who are not members of the District Medical Societies. With very few exceptions, your Chairman has had no report from the District Societies; certainly not enough to make a report to the State Society. And in regard to the questions asked of the several District Societies as to the charges, your Chairman is sorry to say that in only two instances has he received notification of any official action from any of the District Societies throughout the State.

We feel that this Committee on Legislation is of such vital importance to our interests that it should be enlarged to one member from each District Medical Society; believing that in this way we may more quickly and successfully reach the members of the Legislature, as each member of the Committee would then have a duty to perform. We would suggest that you further instruct your Committee at this session to obtain, if possible, before the next meeting of the Legislature, answers to the questions which have been submitted to the Dis-

trict Societies, and that they have the power to draft a bill to be presented at the coming session of the Legislature covering the fee question in cases of lunacy, post-mortems, and witnesses at coroner's inquests.

Your Committee desire to express their sincere thanks to our Recording Secretary, Dr. Chandler, who has always been very ready and prompt to assist us whenever called upon, and it was entirely through his influence that we obtained the assistance of the gentlemen from New York in our fight against the Osteopathic Bill.

The Committee is of the opinion that the term Osteopathy is a misnomer as applied to a method of treatment that consists chiefly of massage and the use of the Swedish movements; that the claims made for refinement of diagnosis cannot be substantiated; that the cures of gross lesions cannot be demonstrated, and that the benefits derived from the so-called Osteopathic treatment is not greater than usually results in the practice of skilled Masseurs. It is not a system of medicine, and its propaganda is in the hands of those skilled in deceit.

The Committee is not prepared to say that the practice of this system can be suppressed; but it suggests that it can be controlled, in the same way as is the legitimate practice of medicine in this State. Compel every applicant for license to practice to observe the requirements of the law establishing the State Board of Medical Examiners, and the amendments thereto, with proper modifications, as is done with Homeopaths and Eclectics.

The Committee is of the opinion that the fee for examination of indigent insane should be at least five dollars. This would be but a minimum sum for the time consumed and responsibility incurred in the performance of the duty.

A post-mortem examination of a body, ordered by a coroner or county physician, should command a fee of from $25.00 to $100.00, according to the thoroughness of the dissection required.

A physician summoned to give testimony at a coroner's inquest, in the county in which such physician resides, should receive a fee of $5.00. If summoned to a neighboring county, the fee should be $10.00. The above fees should prevail if the physician is summoned to give similar testimony in court.

The Chairman of the Committee desires to express his appreciation of the services of Drs. Strock, Baldwin and Leal. They have been

ever ready and anxious to do all in their power to assist in either the passage of measures, or working industriously against bad ones.

The Committee has not been able to accomplish all we had hoped for; but we have made a gallant fight to the best of our ability to prevent the passage of measures which were detrimental to the medical profession of our fair State, and to uphold the honor and dignity of the Medical Society of New Jersey.

All of which is respectfully submitted.

L. M. HALSEY.
A. K. BALDWIN.
DANIEL STROCK.

PRESIDENT'S ADDRESS.

BY E. L. B. GODFREY, A. M., M D.,
CAMDEN, N. J.

THE EDUCATIONAL STANDARDS OF THE MEDICAL PROFESSION OF NEW JERSEY, PAST AND PRESENT.

The history of New Jersey shines resplendent in the glory of great actions and high achievements. Not alone in the arts of war or of peace are these achievements renowned, but also in the domain of science, they glow as beacon lights in American medicine. What the medical profession of New Jersey has accomplished in establishing and maintaining high educational and professional standards, from the first examinations inaugurated in 1772 to the present requirements for examination and license, is the theme to which I beg to call your attention to-night.

In the early period of the Colony of New Jersey, medical practice was without regulation save by the crude laws promulgated by the Duke of York. But, with the advent of the Puritans and the Knickerbockers of East Jersey, under Berkeley and Carteret, and of the Quakers of West Jersey, under Fenwicke and Byllinge, there came physicians whose training in the schools of Europe made them leaders among the early settlers. Their interest in local government and in their profession, especially in the practice of inoculation at this period, materially contributed to their influence.

But comparatively little progress was made in a professional way in the Colony of New Jersey until the close of the French and Indian war in 1763. This war, according to Dr. Toner, gave the native physicians opportunities to note the methods of practice current with English army surgeons stationed at the military hospitals located at Burlington, Trenton, Perth Amboy and New Brunswick. These opportunities stimulated their professional knowledge and pride so that, according to Dr. Wickes, they organized, three years later, in 1766, the Medical Society of New Jersey. In the first year of its existence the Society took up the subject of medical education. It was agreed that " No member should take a student as his apprentice who

did not possess a competent knowledge of Latin and some knowledge of Greek, and agree to remain as an apprentice to the master for four years, three of which should be spent with the master and the last in some school of physic." Thus an educational standard was established by this Society one hundred and thirty-six years ago.

Six years later, in 1772, the Society secured a legislative enactment regulating the practice of medicine within the Colony. This provided, in substance, that no person should practice medicine until he had been first examined in physic and surgery by any two Judges of the Supreme Court, assisted by such persons as they saw fit. Thus State medical examinations were legally established in New Jersey one hundred and thirty-one years ago.

By this enactment, the Society became a potential factor in the Colony and, during the War of Independence, its members rendered the greatest service to the State, both in council and in the field, by reason of their high education, professional zeal and exalted patriotism.

At the close of the Revolution and immediately following the institution of the State of New Jersey, this Society, in 1784, procured the re-enactment of the Colonial law requiring State medical examinations. These examinations were conducted through the medium of the Supreme Court, and were requisite for medical practice and for membership in this Society. This method of examination instituted in 1772 was continued until 1816, a period of forty-four years, when the State transferred the examining and licensing power from the Supreme Court to this Society, conferred upon the latter the authority to determine the qualifications of candidates for license, to grant license to practice medicine, and to confer the degree of Doctor of Medicine.

In the light of to-day the granting of such authority to this Society would be regarded as unconstitutional. The State cannot delegate its authority to any organization, since all State officers must be either elected by the people or appointed by the Governor; nor can any Governor be limited in his appointments to any list selected by any specific society, though he should be willing to listen to reasonable recommendations.

The Society at that time (1816) required an apprenticeship of four years, or three years if possessing a liberal education, including attendance upon at least one course of medical lectures, as a requirement for admission to the examination. The examinations were held in Materia Medica, Pharmacy, Chemistry, Anatomy, Surgery, Midwifery

and Theory and Practice of Physic. From the first this Society, through its examinations, guarded with jealous care the portals of the profession. In 1849 it endeavored to nationalize its system of licensure, and urged the American Medical Association, organized two years previously, to endorse the separation of the teaching from the licensing powers and the establishment of State examinations for State license. College influence, however, proved too strong, and the resolution was not carried out.

The Society believed in the establishment of a legal standard of medical education. In order to still further advance that of New Jersey, the Society, in 1851, endeavored to secure from the Legislature a supplement to the Medical Act, embracing still higher ideals. Among other provisions, it included a four years course of medical study from applicants without a diploma in the Arts, as a basis for its examination and license. This movement caused much excitement among the medical colleges of adjacent States. They raised the cry that the censorship of the Medical Society of New Jersey was inimical to public and professional interests. The College of Physicians and Surgeons of New York, the University of New York, the University of Pennsylvania, Jefferson Medical College, and Pennsylvania College joined interests in opposing this measure. They secured an amendment to the supplement compelling the Society to grant a State license to their graduates upon the presentation of their diplomas with fees and testimonials as to character.

For the first time in its history, the Legislature thwarted the interests of the Medical Society of New Jersey.

The execution of this law became at once a source of embarrassment to the Society because of its limitations and the favoritism shown to the colleges named. The act not only practically abrogated the examining authority of the Society, but placed a premium upon graduation from these colleges and exacted the penalty of examination from the graduates of all other medical schools. As a result, a feeling of dissatisfaction pervaded the profession. To meet this, the Society adopted conciliatory measures by admitting graduates of any regular medical school to practice in this State without examination. But this concession failed to stem the tide of opposition to the examinations of the Society from the graduates from other schools and systems of medicine. This enactment was so manifestly unjust that the graduates of other medical colleges secured from the Legislature,

in 1854, the enactment of a law granting to all physicians holding diplomas from any medical college in any State of the United States, after three years of study with a lawful practitioner, including two full courses of lectures of not less than twelve weeks each, to practice in this State upon depositing an English translation of their diploma with the Clerk of the County in which they resided.

In this struggle between the Society and the colleges, from 1851 to 1854, the Society was clearly beaten. The examining and licensing power of the State, first exercised through the Supreme Court from 1772 to 1816, a period of 44 years, and through this Society from 1816 to 1854, a period of 38 years, making a total of 82 years, was completely abrogated, so that the Society, at its centennial anniversary, 1866, surrendered its examining and licensing privileges and rights to the State, after holding them for 50 years.

This was the darkest hour in the educational history of the medical profession of New Jersey. The profession was practically overwhelmed by these enactments. The standards were not only lowered, but the portals of the State were thrown wide open to every kind and grade of physician, from any and every State, even from the bogus medical colleges which began to flourish at this time. The profession was despoiled of much of its former dignity; quacks and pretenders abounded everywhere throughout the State and plied their vocation unmolested. There were no laws governing the practice of medicine in New Jersey, except the recording of a copy of a diploma with a County Clerk, and this was indifferently enforced because the Clerk was unable to distinguish between genuine and fraudulent diplomas. This condition of affairs extended until 1880, a period of 26 years, when, owing to the public scandal caused by the bogus medical colleges and exposed by the lay press, chiefly by the *Philadelphia Record*, the filing of a fraudulent diploma was made a misdemeanor.

During this period of twenty-six years, private medical schools, without endowment and proprietary in character, sprang up with mushroom-like growth in nearly every city in the adjacent States. Their reputation and success rested largely upon the number of students they could graduate in two courses of lectures of sixteen to twenty-four weeks each, each course a repetition of the other. In none of these colleges was an entrance examination required. But the low grade of requirements, supplemented by a still lower grade of teaching, was not sufficiently low to accommodate many desirous

of practicing medicine; consequently bogus medical colleges flourished luxuriantly in New Jersey as well as in adjoining States. Physicians multiplied so rapidly that a medical diploma had but little significance and was no evidence, *per se*, of a reasonable medical knowledge. In fact, hundreds of persons practiced medicine in New Jersey who had never graduated from a medical school.

The act of 1880, and its supplements, proved a failure, and medical practice in this State remained practically without restriction from 1854 to 1890, a period of thirty-six years.

During this period, the brilliant researches of Lister, Pasteur, Koch and others, with the practical experiences afforded by the Civil and Franco-Prussian Wars, revolutionized medical practice and gave new conceptions of the cause, nature and treatment of disease and injuries. Public and professional sentiment became aroused to the low educational status of medical colleges, a large percentage of which were unable to give a proper course of instruction for want of endowment. The demand for State regulation of the practice of medicine became imperative; not alone to protect the people, but also to advance the cause of medical education and sanitary science. The discussion of the subject was general. The controversy developed that no government, neither the United States nor foreign powers, granted the right to practice medicine on a medical diploma issued by a private teaching institution, except our State governments. The United States, like the foreign powers, refused to accept a medical diploma as a test of qualification, and exacted examination from all applicants for admission to the medical corps of its Army and Navy. Various States took up the problem to discover a solution. The conclusion was reached that, in view of the authority exercised by physicians over the health of its citizens, a State should not accept, without examination by its own officers, a diploma from a college outside of its jurisdiction, especially from private medical institutions, owned and controlled by their faculties. Investigation showed that a large percentage of medical diplomas represented more of a commercial than a professional value. It, therefore, became necessary for States to exercise their inherent right to regulate medical practice by mandatory enactment and to dictate the qualifications required for medical license. The need for this action was the greater because there was no fixed or accepted standard of medical education in the colleges.

In accordance with the spirit of the times, the State of New Jersey established, in 1890, a minimum standard of medical qualifications and appointed direct representatives to examine and license, in the name of the State, all persons hereafter commencing the practice of medicine within its borders. Unlike the delegated authority exercised by the Supreme Court and by this Society, these appointments were direct and for the exclusive purpose of ascertaining and certifying to the fitness of applicants for a State license. These representatives were appointed as State officers, for State duties, and were directly responsible to the State for their actions.

At this time the short period of study required to obtain a medical diploma did not warrant the establishment of very high academic and medical standards, while the long period of unregulated medical practice would have made it difficult to enforce them. Three classes of licentiates were provided for by the statute of 1890. Graduates in practice for more than five years were examined in seven branches of medicine; graduates of less than five years' experience were examined in fourteen branches, and undergraduates were given a partial examination, to be completed after graduation. No fixed period of academic and medical study was at first required by the statute; after January, 1892, three years of medical study was required from the second and third classes, with evidence of some preliminary education.

The Act of 1890 was not satisfactory in its scope or its requirements, and was revised in 1894.

The Act of 1894 required a competent, common school education and four years of medical study, including three courses of lectures in different calendar years, prior to receiving the degree of Doctor of Medicine, with testimonials as to character, as conditions of admission to the examination. The examination embraces fourteen subjects in nine sections, ten questions to each section, and a general average of 75 per cent. to obtain a State license.

This act marked a great advance in the medical standards of New Jersey and has served a grand purpose. It has been extensively copied by other States. When enacted, it was abreast of the times, but the progress of medical science in the last decade demands still higher academic and medical education. It became necessary to revise the law to keep in touch with the examining requirements of other States. This revision would have been made earlier had it not been

or the difficulty in establishing a satisfactory public school law, which was necessary to fix the limit of academic requirements.

The Act of 1894 was amended on April 8th, of this year, after conference with the Governor, the medical representatives of the State, and consultation with a number of the leading physicians of the State. Its provisions go into effect July 4th.

The academic requirements are raised by the amendment from "a competent, common school education" to a diploma issued after four years of study in a normal, manual training or high school of the first grade in this State, or in a legally constituted academy, seminary or institute of equal grade, or a student's certificate of examination for admission to the freshman class of a reputable literary college, or an academic education considered and accepted by the State Superintendent of Public Instruction as fully equivalent. These requirements are now demanded by the best colleges.

By this means the State secures a fair amount of academic education in its licentiates, while debarring none from its examinations by reason of limited educational opportunities. The public high schools are free to all, and if unable to attend these institutions, the candidate may go before the State Superintendent of Public Instruction, or the State or County Boards of Examiners for Teachers, and demonstrate by examination his fitness to be admitted to the medical examinations. The rich and the poor stand on an equal footing. It is the quality of the education and not the place or circumstances under which it is obtained, that is requisite. Aristocracy in medicine is neither established nor encouraged by this law.

The minimum medical requirements for a State license are four full school years of medical study, of at least nine months each, including four courses of lectures of at least seven months each, in four different calendar years, in a legally incorporated American or foreign medical college, prior to receiving the degree of Doctor of Medicine. This is the basis of graduation in the best medical colleges, and places New Jersey on a par with the adjoining States. The State has thus made steady progress in raising the requirements for its license since its examinations were established in 1890. No State examination preliminary to the study of medicine is required, because New Jersey has no medical colleges.

The examinations for medical license are conducted strictly within the provisions of the statute. It has been found that written exami-

nations are the best available test. The State only demands that a candidate meet its minimum requirements, which indicate the possession of a reasonable medical knowledge. Candidates are known by number only to the examiners. The rules are such that fraud, impersonation or favoritism are practically impossible. After the examination, the entire record of each candidate, embracing his credentials, examination papers, averages attained, etc., is filed in the State Library for public inspection and as *prima facie* evidence of all facts therein contained.

The new law makes concessions to veteran doctors. Five years of reputable and continuous practice may be accepted for admission to the examination in lieu of one course of lectures, in the case of graduates prior to 1903; and ten years of practice for two courses of lectures in the case of graduates prior to 1894, provided that the exemption be stated in the State certificate. These provisions are but just to those members of the profession whose practical experience is entitled to recognition and more than offsets the technical glibness of the tyro fresh from the arms of his Alma Mater.

The need of State supervision over the admission of medical practitioners to the rights, privileges and immunities that the State grants to the profession is now admitted. Every State and Territory in the Union demands from each beginning practitioner a State medical license based upon examination, or a diploma from a recognized college, except Alaska, where a license fee of $50 per year is required from itinerant physicians. Even Hawaii, Porto Rico and the Philippines require examination and licensure.

By virtue of this supervision, the State guarantees to its citizens that its medical licentiates possess at least a reasonable knowledge of medical science. Wherever the standard of requirements and of the examinations has been scrupulously maintained, and all candidates for license placed upon the same footing, no matter from what college they were graduated, there State supervision has been a potential factor for the public good. It has extended the curriculum of medical study and promoted the cause of medical education more than any other factor. It has forced colleges to adopt as least the minimum requirements of the States. It has uplifted the *morale* of the profession and driven unlawful practitioners from the State in great numbers.

The best medical colleges advocate State supervision and high

standards for license because they alone can furnish the facilities necessary to obtain the required knowledge, and the laboratory method of teaching which is now demanded by the progress in medical science. State supervision will reduce the poorly-equipped and unendowed colleges to the minimum, if it does not ultimately compel them to yield their charters. Private medical schools must go to the wall. These schools served their purpose and were useful when the country was sparsely settled and medical science was comparatively simple. Now they are unable to meet the demands of modern educational methods. When it is remembered that there are 156 medical colleges in this country, with about 27,500 matriculants, graduating over 5,000 students annually; that about 63 per cent. are private corporations owned and governed by their faculties, essentially private institutions, without endowment or the facilities for giving a first-class medical education, and lax in enforcing the entrance examination, the need of State supervision over medical education and practice becomes apparent. Repeal the enactments of central jurisdiction over medical practice, and the requirements for the title of Doctor of Medicine would go back to a two-years' course as before. There is no other way of compelling an unendowed college to require four years of study except by the State making it a condition of admission to its examinations. Much has been accomplished in this direction, but much still remains to be done.

The State of New Jersey, through its medical representatives, exacts compliance with the high standards of the laws from all applicants for its medical license. No diploma has been recognized from any medical college of lower standard than the statute requires. Medical diplomas are not a certain indication of a reasonable medical knowledge, nor is the entrance examination agreed upon by the Association of American Medical Colleges adhered to by all schools. A large number of candidates have been refused admission to the State examinations because unable to meet the requirements of the statute.

The charters of two medical colleges have been revoked, and the establishment of a third, advertised to grant a diploma on a two-years' course of study, was recently defeated in the Senate after it had passed the Assembly. Hundreds of charlatans and pretenders have been driven from the State, and there is less fraudulent practice in New Jersey to-day than at any time in its history. The practice of osteopathy has been shown to be in violation of the statute by a

recent judicial decision. The Court held that no one should be permitted to administer and prescribe, as a practice, for the curing of disease, unless with the permission of the State, and that the State was to be the sole judge of any and all systems and of the fitness of the person to administer to the sick; that no one has a right to practice any system whatever, medical or religious, such as the laying-on-of-hands, without a State license. This decision applies to Christian Scientists, whose belief that disease has no existence, but is a sin to be healed by prayer, is a menace to public safety.

An especially gratifying feature of the operation of the statute is the progressive improvement in the personnel of candidates for a State license. A few years ago, about 5 per cent. of all candidates held degrees in the arts or sciences, including pharmacy. Last year, 21 per cent. held academic or scientific degrees. Step by step the present medical statute has built up the educational standards of the profession of New Jersey and has done more to dignify and ennoble it than any legislative enactment since the institution of State examinations, 131 years ago, except the incorporation of this venerable Society in 1790.

The history of State examinations from 1772 to 1854, a period of 82 years of high standards and professional worth; the absence of examinations from 1854 to 1890, a period of 36 years of unrestricted medical practice without State standards; the resumption of State examinations in 1890, followed by steady improvement in both the State standards and the personnel of the profession— these facts of history show the acknowledged need, the great advantages and the unlimited possibilities of a system of medical licensure controlled and operated by the State alone.

The value of a New Jersey certificate of license may be estimated when it is stated that, during the past year, only 82 per cent. of the graduates, representing about 40 different medical colleges, proved themselves capable of obtaining it. The number of licentiates during the past year added about 6 per cent. to the number of physicians already in practice in this State, the proportion of doctors in New Jersey now being about 1 to 600 of the population. The demand of both the profession and the public is not for more, but for better educated physicians.

Of the total number of physicians in New Jersey, about 69 per cent. hold the certificate of State license. A quack may flourish a diploma,

but it is impossible for him to get the certificate of New Jersey under the present statute and the accessory rules and regulations. Fraudulent impersonation, also, is practically impossible.

Because of these facts, the certificate of medical license issued by New Jersey confers an added dignity on those members of the profession who have received it and renders them eligible at this time for license in perhaps more States than that of any other State of the Union.

The present medical statute has been sustained by several Courts of Common Pleas, Supreme Court Justices and the Court of Errors and Appeals. The enforcement of the penalties of the statute rests wholly with the prosecuting authorities of each county. The cooperation of this Society and the District Societies with the Prosecutors, through committees formed for that purpose, with whom the representatives of the State would willingly work, would greatly aid in the enforcement of the statute. To make the law more effective, it is the purpose of the State to secure legislation making the display of a sign, circular or advertisement, or any other device to advertise as a practitioner of medicine, or of any of its branches, without license, in itself a misdemeanor, punishable by fine or imprisonment. When this is done, the protection of the citizens of New Jersey against medical pretenders will be complete.

The perplexing question, gentlemen, in the maintenance of the educational standards of this State, is the endorsement of licenses issued after examination by other States. This perplexity arises from four causes. The unsettled state of medical education throughout the country; the wide variation in the curricula of the 156 medical colleges, in respect to their entrance examinations, methods of teaching and requirements for graduation; the differences in State laws regulating medical practice, arising from the varying needs of different States according to their public school standards and extent of population; the diversity of opinion in the profession itself as to what should be required to obtain the title of Doctor of Medicine and State authority to practice, contribute complications to the solution of the question on a common and equitable basis.

For the past thirteen years the National Confederation of State Medical Examining and Licensing Boards has considered the question of reciprocal endorsement without reaching a solution. For the past three years the Confederation of Examining and Licensing Medical Boards of the Middle West has been wrestling with the subject, and,

in April last, proposed a double standard for endorsement—one upon a State certificate of examination and license; the other, upon a diploma from a recognized college. This is the method that wrecked the examinations of this Society in 1851. How utterly it compromised the Society in the favoritism shown to certain colleges; how thoroughly it failed to accomplish the end in view, the history of this Society attests. Such will be the result of any system that fails to exact from all candidates for license the same minimum qualifications or accepts the diploma of any college in lieu of a State examination.

What, then, can be done to harmonize conflicting opinions on the question of State standards without undue severity on the one hand or undue laxity on the other?

Let us consider the subject from various view points. Shall every applicant for license undergo an examination in this State after passing an equal examination in another State having equal standards of requirements?

Take a hypothetical case. Assume the case of a physician, graduate of a reputable medical college, licensed after a State examination equal in grade and kind to that of New Jersey; who has practiced five, ten or more years; who desires to remove to this State because of health, family or professional reasons; who can meet every requirement of the law, moral, educational and examining—shall the experience of such an applicant be wholly discounted and he be compelled to submit to a repetition of an examination in the same elementary branches in which he was previously examined and passed when he first obtained his State license? Is there any physician of five or more years' practice here present who would approve of this course in his own case? Probably not one.

Such an examination seems uncalled for. It is a hardship. It reduces the best men to the level of the lowest. It is unnecessary because professional efficiency has been once proven by a co-equal State. It is contrary to the spirit of the profession, because it discounts experience and places the distinguished practitioner on the same footing as the beginner.

Should it be said that all lawyers beginning the practice of law in New Jersey are compelled to pass a State examination for license, except when in consultation with the attorney of record in a given case, let it be remembered that, in law, statutes and court procedures differ in different States, while, in medicine, the principles and practice are the same in all the States.

If, then, a repetition of a State examination, or a re-examination in essentially the same branches, upon removing from one State to another, is a hardship to the profession, what then is the best, the broadest system of interstate endorsement of State medical license?

There are two systems in vogue. The first restricts by statute the endorsement of licentiates to those States which reciprocate by granting equal rights in return. The second is also statutory, but leaves endorsement optional with the licensing authorities, provided the standard of requirements of reciprocating States are substantially the same.

Let us consider the first system, viz., endorsement restricted by statute to those States alone which reciprocate. What is the object of such restriction? It is to compel reciprocation from States to whom endorsement is given, on the ground that endorsement cannot be justly given when not granted in return. Will it accomplish this? No! No State can be compelled to reciprocate by any process of law or retaliation. The theory of compulsory reciprocity may seem to some, at first sight, just to the profession and good State policy. Experience, however, proves it to be unjust to the profession and a bad State policy. It is not a success, and has proved a stumbling block to the extension of interstate endorsement.

Of the 54 States and Territories of the Union, as far as can be ascertained, only 5 have compulsory reciprocity embodied in their statutes; while in the remaining 49 endorsement is optional with the licensing authorities or not provided for by statute.

What reasons, it may be asked, can be adduced to prove its injustice to the profession and its detriment to the State?

1. It makes a State medical certificate paramount to a diploma from the highest medical colleges and to the qualifications of the most distinguished practitioners in the question of endorsement; whereas, such certificates should be regarded as only co-equal with the several conditions of endorsement, in justice to the profession and the colleges. 2. The system is mandatory and places an embargo on applicants of professional merit from States that cannot reciprocate by reason of higher requirements. This may be illustrated by the recent refusal of a certain State to accept the New Jersey certificate because New Jersey could not reciprocate an account of its *higher* standards—an injustice at once manifest. 3. Its application is limited, because State medical laws are not uniform, and the limitation

will continue for years on account of differences in population and in the grade of public schools in the different States. 4. Its tenure, also, is uncertain. The changes continually being made in State laws to keep in touch with the progress of medicine will cause constant interruption of endorsement and consequent confusion and hardship to the profession. 5. It is contrary to the formulated ethics of the profession, because it is a revival of the "*lex talionis*" of the ancient codes.

As a State policy, compulsory endorsement of those States only which reciprocate, if engrafted in the statute, would prove detrimental to the profession of New Jersey. Such reciprocity could not be entered into with New York or Pennsylvania, or other adjoining States, as has been suggested, because the statutes of these States do not recognize such a provision. Were such a system of reciprocity adopted, it would involve endorsing all the licentiates of reciprocating States, the good with the bad. It would mean, therefore, endorsement on the omnibus plan, since all the licentiates of a State stand on an equal footing.

What would be the result? The numerical ratio of the profession of New York to that of New Jersey, on the basis of the census of 1900, is about 6 to 1; that of Pennsylvania to New Jersey, about 4 to 1; that of New York and Pennsylvania combined is approximately 10 to 1. New Jersey, therefore, is not the equal of the adjoining States either in population or number of physicians, and an exchange of medical licenses on the basis of equal rights and privileges in return would, in view of the great disparity as to numbers, prove detrimental to the profession of this State. Nor is this all. The influx of physicians for summer practice along the coast, in the mountains, by the lakes and at the suburban resorts, makes that system of endorsement still more detrimental.

Reciprocity, therefore, restricted by statute or by voluntary agreement, which endorses the licentiates of those States only which reciprocate, and on their State certificate alone, in the relative proportion existing between this and the two great adjoining States, with the inducements for summer practice found here, would literally engulf the profession of New Jersey. This is not a theory, but a fact. New Jersey cannot afford endorsement on this plan. The profession of New Jersey needs protection from itinerant summer practitioners, whose methods are not always ethical. The State authorities have

checked this influx by refusing to recognize the certificate of any State as the sole requirement for endorsement, but demand that the holder shall meet the same requirements as applicants for examination.

As a State policy, therefore, compulsory reciprocity is plainly objectionable. Like a two-edged sword, it would cut both ways. It is not needed in New Jersey for the protection of medical colleges, since there are none in the State; neither has it been adopted by the adjoining States. It would stand in the way of medical progress, since its adoption would exclude endorsement of all States having higher requirements. Instead, therefore, of compelling reciprocity, it would check the extension of interstate indorsement, to the disadvantage of the profession.

Let us now consider the second system, which permits indorsement by statute, but leaves its application optional with the licensing authorities. This is a step in advance over indorsement restricted by statute to reciprocating States, because it admits of a wider application through the discretion permitting the licensing authorities in selecting States to be endorsed. Where this system is in operation, it is carried out by a voluntary agreement between the reciprocating States to endorse each others' licentiates. This method is open to most of the objections which apply to compulsory reciprocity, and has been found impracticable in its execution.

This impracticability is due to four causes, viz., the difference in State laws and in their interpretation; the difference in the standards of requirements for State license; the difference in the status of medical colleges, and the different opinions as to the eligibility of candidates rejected by one State for the examinations of another.

When differences arise between State authorities over any or all of these causes, how can they be adjudicated? By law? No! There is no law, national, inter-state or State, to adjudicate these differences or to enforce any agreement which may exist. Such agreements, therefore, based upon voluntary action, may be broken at pleasure and without redress, to the discomfiture of the profession.

This is the experience of the licensing authorities of this and other States. In the absence of uniformity of college and State requirements, there is, therefore, at this time, no basis for common and united action which can be applied to any considerable number of States; nor can there be, until the laws of the States become uniform.

It has been suggested that a national enactment would solve these

difficulties and provide for inter-state endorsement on a common basis. This, however, is practically impossible. The National Government has no jurisdiction within any State in respect to the police control of its citizens, under which department State examination and license fall. Before a national enactment can be obtained there must be secured an amendment to the Constitution of the United States involving a surrender of State sovereignty on the one hand and a centralization of authority on the other. It is not probable that such an amendment would be ratified by three-fourths of the States, with the surrender of the control of the medical practitioners within their jurisdiction. A voluntary National Examining Board has been proposed, but such a board would have no legal standing and would be wholly without official recognition.

In the absence of any national or interstate enactment, reciprocity, whether compulsory or voluntary, is impracticable, except to a limited extent, until there is uniformity among the States in respect to laws, requirements and grade of State examination. Each State must regulate medical practice within its own borders. Especially must New Jersey do this, whose high standard of requirements must be maintained; who has no jurisdiction over any medical college; whose population already carries its full quota of the profession, and whose territory is invaded annually by large numbers of physicians for the purpose of summer practice.

With the necessity of State examinations and license admitted, how can New Jersey maintain her educational standards and protect both the public and the profession while endorsing medical licentiates of other States? It is admittedly not good State policy to exclude the citizen of another State who can conform, in all respects, to the requirements of this State; on what terms, therefore, shall they be admitted? The problem has been solved by the licensing authorities of this State, after a wide experience, and has been carried into snccessful execution. What, then, is the solution? Simply to demand and enforce the same requirements for license by endorsement as for license by our own examination. *New Jersey does not accept the license of any State as a sufficient ground for endorsement.* A State license is accepted as only one condition of endorsement, and only for the examination it represents. Just as from applicants for examination, so from applicants for endorsement, the same minimum standards of academic education, medical training, moral character

and examining requirements are exacted. In addition to this, the New Jersey certificate of either examination or endorsement cannot be obtained except upon the recommendation of a registered physician of this State. It is not alone the State, but also the individual, that is endorsed. The refusal, therefore, of a State to grant endorsement in return does not afford a legal or valid reason for rejecting an applicant who can meet every requirement of the law.

The individual merit and professional qualifications of each applicant stand foremost in the question of endorsement for a license of another State. These must be supplemented by a State examination in substantially the same medical branches and conducted under essentially the same rules and regulations as required by New Jersey, before any State license can be endorsed. If any candidate cannot meet the academic, moral, medical and examining requirements for a New Jersey license, this State is under no compulsion, statutory or voluntary, to endorse him, no matter what State license he may hold; if he can meet the requirements, he may be endorsed on the certificate of any State whose standard of requirements is substantially the same as that of this State, when supplemented by a recommendation from the profession of New Jersey.

This, gentlemen, is believed to be the best, and perhaps the only method by which the high educational standards of New Jersey can be maintained and the profession fairly and justly dealt with. By this method New Jersey is the sole judge of the qualifications of its medical licentiates. This is the intent of our law. Only the best practitioners are endorsed. The record of each candidate as well as his State license is the subject of specific inquiry, and itinerant physicians of doubtful standing are quickly discovered and easily excluded.

This system, too, is in the interest of higher education. It permits the selection of applicants from any State in the Union, whose moral character and college training meet the requirements of our law and whose State examination is substantially the same as that of New Jersey.

This system admits of National application of the principles of endorsement, because each State is the judge of the qualifications of applicants for license, whether examined or endorsed. It is the only system so far devised that will admit of National application. Up to the present time it has made the certificate of New Jersey acceptable

to more States than that of any State in the Union. When the new law goes into effect, July 4, it will not be possible to continue the endorsement of a number of States now endorsed, because of our higher standard of requirements; but other States of equal requirements will take their place, and the new standards are so high that the profession of this State will be eligible for endorsement throughout the country, if the qualifications of the applicant are the basis of consideration.

In conclusion, gentlemen, permit me to express my appreciation of the high honor you have conferred upon me in electing me President of the oldest, the grandest and the most influential State medical organization in America.

In looking backward, we behold the birth of this Society nearly a score of years before our nation was established and our State was founded; we look with conscious pride upon History unfolding from her ample pages the names of illustrious members, renowned in science, literature, politics and arms, and we witness with satisfaction the re-establishment of legally regulated professional standards in the interest of the profession.

In looking around us, we behold this Society larger in membership, more potent in influence, and with a better understanding of its relations to the State, than ever before.

In peering into the future, we behold this Society going forth with a firmer purpose to grasp the secrets of advancing science, to extend the period of human life, and to join with the State in maintaining the highest educational standards that the progress of medicine warrants and the welfare of the people demands.

THE ORGANIZATION AND OPERATION OF HOSPITALS AND OTHER CHARITABLE INSTITUTIONS IN THE STATE OF NEW JERSEY.

BY WALTER B. JOHNSON, PATERSON, N. J.

The paper here presented has been written for the purpose of indicating the steps necessary to be taken in organizing hospitals and other charitable institutions, and also to consider in a general way the various forms of management, and the methods to be used in the operation of such institutions, especially hospitals.

Prior to the year 1877, any persons who were desirous of organizing one of the various forms of Charitable Institutions and incorporating the same in a legal manner were compelled to apply to the State Legislature for a charter permitting them to do so.

The following act of the Legislature, Session of 1877, approved March 9th, was introduced and became a law, thus permitting any body of men or women to organize and incorporate for such purposes by acting in accordance with the provisions of this General Law without making special application to the Legislature for a charter.

When for the purpose of meeting certain conditions, which make it necessary to care for indigent persons, an organization is contemplated, it is customary for the persons interested to first make an effort to interest others, in order that the necessary organizers may be secured and the financial success of the effort assured. And for this purpose a prospectus should be prepared setting forth the needs for the proposed institution; the necessity for the form of treatment which it is proposed shall be employed; the estimated number of deserving persons needing the succor which such an organization will give; the inadequacy of the present means of supplying the required aid, and the objects which such an organization will hope to attain.

In this prospectus it should be distinctly stated that the association will be incorporated under an act of the Legislature of the State of New Jersey entitled:

LAWS OF NEW JERSEY.

1709–1877. Revision of Statutes, page 1343.

An act to provide for the incorporation of associations for the erection and maintenance of hospitals, infirmaries, orphanages, asylums and other charitable institutions.

Approved March 9, 1877.

P. L. 1877, p. 159.

Number of persons who may make certificate of association.—Section 1. That any three or more persons of full age, a majority of whom shall be citizens of and residents within this State, who shall desire to associate themselves together for the purpose of the care, cure, nurture or maintenance of sick, injured, infirm, aged, indigent, deaf, dumb, blind, idiotic or insane persons, or of orphans, half-orphans or destitute children, or for any two or more of such purposes combined, may make, record and file a certificate, in writing, in manner hereinafter mentioned.

Form of certificate.—2. That such certificate in writing shall set forth—

I. The name or title assumed to designate such association.

II. The place or places in this State where the purposes of such association are to be carried out.

III. The purposes for which the association shall be formed.

IV. The names of the governors or directors who shall manage its affairs for the first year of its existence.

Certificate to be proved, acknowledged and recorded.—3. That such certificate shall be proved, or acknowledged and recorded, as required of deeds of real estate, in a book to be kept for the recording of certificates of incorporation, in the office of the Clerk of the county where the principal purposes of such association are to be carried out, and after being so recorded shall be filed in the office of the Secretary of State; the said certificate, or a copy thereof, duly certified by said Clerk or Secretary, shall be evidence in all courts and places.

To become a body politic and corporate on filing certificate.—4. That upon making such certificate and causing the same to be recorded and filed as aforesaid, the said persons so associating, their successors and assigns, shall, by virtue of this act, be a body politic and corporate, in fact and in law, by the name stated in such certificate, and by that name they and their successors shall have perpetual succession, and power to sue and be sued, plead and be impleaded, answer and be answered unto, in all courts and places whatsoever, to make and use a common seal, and the same to use at pleasure, and to purchase and take, have, hold receive and enjoy, any lands, tenements or hereditaments, in fee simple, or otherwise, and any goods, chattels, or property of any description, real or personal, and whether acquired by gift, grant, devise, bequest or otherwise, and the same to

grant, convey, lease, assign, sell, or otherwise dispose of, for the purposes of said association.

General powers.—5. That the governors or directors of such association shall have power, from time to time, to make alter and amend by-laws, not inconsistent with the constitution or laws of the United States or of this State, fixing and altering the number of its governors or directors for the management of its property and the regulation and government of its affairs, and providing for the classification of and the mode of increasing and perpetuating the governors or directors of the association, and the mode of filling vacancies in and removing any member from their number, and prescribing qualifications for membership of the association, and to appoint one or more superintendents or managers, and such other agents and officers as shall in their judgment tend to promote or advance any purpose of the association, and to prescribe their expected duties.

Compensation for services not to be allowed.—6. That no governor or director of any association organized under this act shall receive, directly or indirectly, any salary or emoluments from such association, nor shall any compensation whatever be voted, allowed or paid by the governors or directors thereof to any governor or director for services, either as governor or director, or in any other capacity.

Exemption from tax.—7. That the property and effects of any association organized under this act, and held for its purposes, to an amount not exceeding five thousand dollars, shall not be liable to the imposition of any taxes.

The persons who have become interested in the organization of the proposed charitable institution must then meet and decide to incorporate. A certificate of incorporation should be prepared setting forth that it is the intention to form an association for the proposed object, and certifying to the name to designate said association, the place in which the purposes of the association will be carried out, the purpose for which said association is formed, and the names of the governors or managers who shall manage the affairs of the said association for the first year of its corporate existence. In witness whereof three or more of the said managers thereunto set their hands and seals.

The governors so signing must then personally appear before a Master in Chancery of New Jersey, who must certify that he is satisfied that the persons appearing are those named in the certificate, and

the contents having by him been made known, did acknowledge that they had signed, sealed and delivered the same as their voluntary act and deed for the uses and purposes therein expressed, and the certificate of incorporation must then be filed in the office of the Clerk of the county and there recorded, and thereafter also filed in the office of the Secretary of State of New Jersey.

The board of governors, managers or trustees thus formed must then, at a meeting regularly called, organize, adopt by-laws, setting forth the name and object of the association; the relations and powers of the board of governors; the membership of the association; the name and number of officers and their duties; the formation of the necessary committees and the duties of the same; an article naming the medical staff, prescribing their duties and powers, and making provision for medical and surgical reports; provision for meetings, special meetings, and the necessary number required to constitute a quorum; adopting a regular order of business for meetings of the board; arranging for alteration or amendment of the by-laws at any meeting of the board for which notice of the proposed change has been given at a previous meeting. Also adopting by-laws for such other items as may be indicated for the proper government of the board, its officers, medical staff or employees.

The hospital must be considered from two separate and distinct standpoints. First, that of the great Christian charity organized and adapted to the needs of suffering humanity; standing ready to care for and succor the unfortunate of any creed, nationality or color, at any and all times anxiously endeavoring to carry on the work instituted by the Great Master. From this view-point the hospital appeals to the charitably disposed citizens of any community for aid. It is necessary that sufficient funds shall be annually accumulated to carry on this work, and the gathering of such funds is the most difficult problem which confronts the boards of managers of most of the charitable institutions.

Unfortunately, the endowment funds are in most instances slow of accumulation, and constant effort is required to increase the annual donation and subscription list proportionately with the ever increasing annual expense, for with each year added burdens must be borne. More of the deserving apply for care and maintenance, new developments necessitate changes in the facilities for work, and the armamentarium of the institution must be kept in perfect condition, repairs

and alterations are constantly in demand, and nothing but "trust in God," concerted action and steady work can pilot the management through the constantly appearing periods of despondency which at times seem to point to certain dissolution. The appeal for help must be made, and unless the response of the philanthropic is prompt and liberal, the work can not be satisfactorily carried on.

From the second point of view, the hospitals of to-day represent in their management and operation the conduction of a great business enterprise. Large sums of money are invested in lands, buildings and appointments, and much money is annually expended for maintenance and pay of officers, nurses and employees.

In every department of a well managed institution the most rigid economy must be enforced. Constant watch and strict attention to every detail of the daily work can only accomplish a uniformly satisfactory progress.

The business of the hospital office in its relation with all of the employees of the house and with all who enter the hospital as private or ward pay-patients must be conducted in accordance with strict business principles. In counter-distinction to the charitable work, everything should be so arranged that in this department the best interests of the institution financially shall be primarily considered.

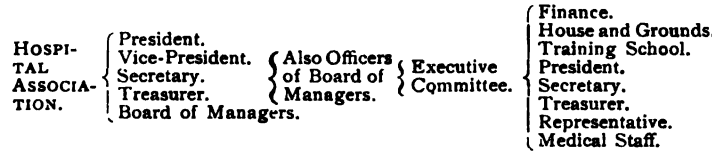
There are three varieties of hospital management, two of which are left without choice in the selection of managers—the hospitals of municipalities, the hospitals of the Sisters of Charity. In the third variety, the hospitals conducted by boards of managers, governors or trustees, the question of which form of management is to be adopted is of vital importance, and it is somewhat difficult to determine, as some hospital workers of experience favor government by male boards, others female boards, and still others mixed boards—male and female.

The male board inspires in the public mind confidence in the business management, but, unfortunately, in many instances the members are so much engrossed in their own business affairs it occasionally happens that it is impossible to secure the services of a sufficient number who will become interested enough to continuously carry on the work. There is no doubt, however, of the ability of such boards if they are workers, to raise money in excess of the amounts which may be raised by others; it is also certain that under such management the cost of maintenance is considerably increased.

Female boards of managers are most careful in their management of the finances, although, generally speaking, they are not able to raise as much money as male boards, and fail to inspire public confidence in their business sagacity. They are generally successful managers, and are always particularly strong in keeping the administrative department (for the care of which they are by long training especially adapted) in most perfect running order.

The mixed board, it would seem, might assimilate all of the good and eliminate all of the bad in the other two forms of government. Theoretically, it would most certainly seem that such a board would be the ideal form of management; the writer, however, is not able, for lack of personal experience, to recommend it.

When the constitution of the board of managers has been settled, the next most important consideration is the question of the methods to be adopted in carrying on the work. The writer recommends without hesitation what might be called the departmental system.



The hospital associations meet annually, elect officers and a board of managers.

The officers are also the officers of the board of managers. The board of managers meet monthly, and three, or more committees, if desired, are appointed annually—finance, house and grounds and training school, the chairmen of which committees, together with the president and secretary, treasurer and one member to represent the medical staff, form the executive committee. This committee meets at least twice a month and conducts all the business between the meetings of the board of managers. At the meetings of the executive committee the minutes of the separate committee meetings are read and acted upon and the recommendations of the committee considered, thus keeping the other members in touch with the work of the several departments. This form of government is equally applicable to the management of a hospital with or without a superintendent.

In case the size of the hospital does not warrant the employment of a superintendent, the executive committee, through the chairman

of the various constituent committees, acts in place of such an officer, dealing directly with the employees in the department under their special charge.

If a superintendent is employed, he must be the official head of the entire household, responsible to the executive committee for the proper management of the institution, and it must be his duty to supply the cohesive force necessary to join together in harmony the working force of the institution, in the same manner that the skillful machinist assembles the integral parts of a great machine and sets and keeps it in motion.

Report of Committee on Present Methods of Education From the Standpoint of the Physician.

BY JOSEPH TOMLINSON, M. D., CHAIRMAN, BRIDGETON, N. J.

That the subject, upon which this Committee was appointed to report, is a most timely one there can be no doubt. The discussion which it evoked at the last meeting of this Society, and the many expressions from individual members in private conversation, demonstrated conclusively that the Medical Society of New Jersey is alive to the evils and dangers of our present educational system.

Since our last meeting many articles have appeared upon this subject in the medical press and several papers bearing upon it have been read in representative medical bodies. Not only is the medical profession showing earnest and solicitous interest in this, but the laity, as well, are earnest in their protests against many existing conditions which threaten the physical welfare of school children. The daily press, as well as leading magazines and periodicals all teem with literature bearing upon the subject, and even public meetings have been called to consider and discuss it.

The educational problem is a most difficult one, in which many factors are involved. Some of these factors are fixed and finite quantities, others are ever changing and infinite. The factor which concerns us most intimately as physicians is the pupil, the youth made of flesh and blood, with all the frailties and limitations of humanity. He is finite. His boundaries are fixed by the very laws of his being, the laws of growth and development, and he is ever under the thraldom of heredity and environment.

The factor which concerns the educator most intimately, is the vast field of knowledge, endless in variety and unlimited in extent. This is infinite. Science, philoson literature, hi sent a boundless and fascinating fi cholar, wh may lead him into the study of or into t culative thought. It is but na his ent scar and investigation, the st some problem before him as let the expense mental. must Years s stud ve case of an e nting s of th all ri per thirs belo lar, sch an e fa pre him and od tion lem lize educ elo p mora consi

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While the causes responsible for the diseases incident to school life are many, by far the most important are:

1st. The early age at which scholars are admitted to the public school.

2d. Too many studies and in many instances too many hours of study.

3d. A lack of classification of scholars.

4th. The lack of proper physical instruction in the public schools.

The early limit of school age is fixed, in this State, at five years.

Undoubtedly a great percentage of children who are sent to school at a very early age are sent there expressly for purposes of convenience. They are sent there merely to be gotten rid of a few hours each day. It is not only manifestly very wrong to make a nursery of the public school, but it is even worse to subject such children, however light may be the task assigned, to a strain which is distinctively and especially injurious to very young children. I refer to the spirit of rivalry and ambition which is constantly being fostered by parents and teachers in the never ending talk about promotion, prizes and the relative "smartness" of this, that or the other child. Children should be taught to study because it is their duty and for study's sake. The vanity both of teacher, child and parent, should be subservient to healthy, broad and normal development.

The "cramming" system incident to so many studies and the overtaxing of the memory not only results in disorders of the nervous system, but also in very superficial work and an entire loss of mental discipline. The number of studies is too great to make thoroughness attainable.

We need a closer touch between educator and physician, even in the planing of the school curriculum, both as to the branches to be taught, and the number to be taught, the broadly educated physician should have a voice. The educator and physician must work together, not spasmodically, but continuously and constantly. Each must comprehend broadly and intelligently the objective point, and each must bring to bear experience and training gained in his special sphere. Education means vastly more than a memorizing of facts, as tersely put by a well-known college president—"Education is above technical scholarship, and the power to think is better than the power to remember."

The imperfect classification of school children is apparent.

As children are brought together in the public schools they present, necessarily, great differences not only as to age and sex, but also as to their physical, mental and moral conditions. We have a heterogenous mass of humanity, some weak, some strong, some tracable, some intractable, some cleanly, some uncleanly, some with the proper instincts and some of the degenerate class.

The percentage of "atypical" or "sub-normal" school children has been variously estimated by different authorities, a fair average would be at least ten per cent. The gradation should be both upon a physical and a psychological basis.

The atypical child, those exhibiting malnutrition or organic disease and the "neurotics" should be properly classified, and it is quite as necessary to separate from normal children the degenerate, as to exclude from among them a case of smallpox or diphtheria. Many a gallows and jail would be cheated of its victim if this were done, and we would only be applying the principle upon which we so strongly insist in every other sphere of our professional work, the principle of prophylaxis.

It is not only cheaper but better from every point of view to take the child in hand at the critical period and reform him rather than wait until he has become a prey upon society. The proper and complete classification of scholars can only be accomplished by a thorough and more extended system of school inspection. Vast strides have been made in this direction, beginning in Boston in 1894, Chicago followed in 1895, New York City in 1897, Philadelphia in 1898, and many other smaller cities since.

As far as I can learn there is no state law to cover school inspection, and in every state except our own the school inspectors are authorized agents of the local boards of health. In this State the whole matter rests with the local boards of education and is optional rather than imperative, and the inspector is clothed with no special authority. An explicit state law, requiring a thorough examination to determine organic diseases and psychic conditions would accomplish very much more. This should include country districts as well as cities and towns.

Proper physical education would be of much benefit to the majority of pupils in the public schools, and is an absolute necessity to some.

The term, physical education, is used in this connection in its broadest sense; it is meant to include everything in the way of applied

physiology, or hygiene, exercise, gymnastics, and recreation which may be indicated in an individual case. This branch should be taught as thoroughly and as systematically, and be as much subject to given requirements for promotion, as the regular curriculum of studies.

This can only be done under the direction of a properly qualified member of the medical profession.

There are abroad many so called "professors" of physical culture who, on the strength of a dozen lessons in certain forms of gymnastics pose as capable instructors in this branch, and unless we are very careful the ignorant pretender will usurp the place in the public schools which none but a physician, and one with special training, is competent to fill.

Systematic physical training is the basis of successful manual, as well as mental and moral training. Many educators are convinced of its importance, and would welcome any method by which it could be thoroughly and systematically accomplished.

In order, therefore, to bring about a much needed co-operation between the educators and medical profession in this State, and in order also to have a more thorough and a more complete medical examination of all school children, as well to provide and insure means for their proper physical development, this committee respectfully recommed that this matter may be referred to a committee from this Society, to report at its next meeting, whose duties it shall be to draft new bills and to suggest the necessary amendments to existing laws.

1st. To have a member of the medical profession on the State Board of Education who shall also have oversight of the school inspectors throughout the State.

2d. To have regularly appointed school inspectors throughout the State whose duties shall be to make a thorough examination of all children in the public schools at stated intervals.

3d. To have introduced into all the public schools a department of physical education, in the broadest sense of this term, which department shall be under the supervision of a school inspector.

This is a matter of vital importance to the community. To promote the well-being of society, to give it more fully developed men and women, healthy in body, mind and morals is the sole object of our profession in this matter. In it we need and, I think, we can

expect, the hearty co-operation of educators. If by our combined efforts we can be the means of accomplishing such legislation, it will reflect honor and credit upon the State of New Jersey by making it foremost in a reform which is greatly needed, and which sooner or later will, in all probability, be effected.

JOSEPH TOMLINSON,
DAVID C. ENGLISH,
E. L. B. GODFREY,
R. C. NEWTON,
W. B. JOHNSON,
Committee.

DISCUSSION.

DR. SAVARY PEARCE, of Philadelphia.—I wish to congratulate you on being so active in new matters although such an old society. The subject which your committee has presented so well meets with my approval, so far as I understand it. It is certainly coming to be known, not only by physicians, but by educators, that the growing youth of to-day, especially in the cities, are being overwrought. This is because in these strenuous times educators are going along in the same fashion, and have added a multiplicity of studies to the school curriculum. I have been interested in this subject, more particularly from the neurological standpoint, and have observed in the past decade instances in which the education has at times been the cause of many mental diseases in children, and I believe that in the large cities no intelligent physician of experience will deny this. This is, of course, not so manifest in the smaller places, and hence the child of to-day is fortunate who is born in the country or in the smaller towns. We must strike at the root of the evil by reaching the educators who are striving after too much. As general practitioners, we should be able to accomplish a great deal by individual instruction and advice in our families. No law can be made that will fit individual cases, and hence it is the duty of the family physician to warn the parents of precocious children of the danger of allowing these bright children to develop too fast mentally. The teachers of such children should be warned against urging such children to compete for prizes. Parents often make the great mistake of adding to the over-filled school course further instruction, such as music and other accomplishments.

The investigation started by the American Medical Association in

the "Section on Nervous and Mental Diseases," I trust will assist you in this very important matter. I believe this Society is the first State society to take a step in this direction. It is perfectly possible to secure the co-operation of the politicians if we only make them see that we are working for the good of the community. It is encouraging to know that some of the educators in New Jersey are already on our side. Many children, it is true, are hereditarily predisposed, but how can we get rid of heredity if we do not begin to improve the present generation? It is an admirable suggestion that the physician be placed upon the school board, but it is important that he should be a broad-minded man of large experience.

DR. ROGERS, Paterson.—As a person having some experience in family practice, I would say that I often urge that the children be given fewer studies, but it is said that this cannot be done because it is opposed to the regulations of the schools. We may perhaps do something by getting the County Societies to recommend to the local boards a diminution in the number of studies at the schools.

PROGRESS IN MEDICINE AND THERAPEUTICS.

BY W. H. IRELAND, M. D., CAMDEN, N. J.

Progress along the lines suggested to me to report upon at this meeting is not only considerable, but in some respects surprising and revolutionary. The brief time allotted for the reading of a report of this kind precludes anything but an outline mention of the subject. It is interesting beyond expression, and it is a pity that the members of the profession, most richly endowed by the experience of active practice, can least afford the time necessary for its profitable consideration.

Who of us has not often deplored the lack of time to devote to these interesting new developments? Consider alone the immense advances made in electro-therapeutics, a division of practice already become so specialized as to have a national and many local organizations, with physicians of superior ability devoting themselves to it exclusively.

How much does the average practitioner actually know of the galvanic, faradic, alternating, and static currents? Still less does he

know of their effects, and their indications for the alleviation of suffering and the cure of disease. How much did they know but a few years ago of the anodyne effect of the positive pole, the electrolytic effect of the negative pole, the muscle contracting influence of the faradic current from the thick wire coil as compared with the pain relieving qualities of that from the fine wire coil, of the benumbing effects of the alternating current, and the many unsuspected effects of static electricity? The cure by electrolytic removal of urethral stricture and of tumors are established facts. The cataphoric diffusion of drugs, directly into and through diseased structures, has a more positive effect than its application with a hypodermic needle, and is at the same time devoid of its objectionable features.

Bouchard (*La Tribune Medicale*, Jan. 14th, 1903), has shown that the direct application of a small portion of a dose locally, by injection, is even more efficient than the much larger quantity given by the mouth, $\frac{1}{30}$ of the usual dose by the mouth being sufficient if injected directly into the affected part, thus also avoiding the necessity of drugging the entire organism simultaneously with one of its parts. Catophoresis would serve this purpose even better, for the medicament could be distributed evenly and accurately to the affected area, without any discomfort, by a mere placing of electrodes of proper size.

To the extraordinary advantage of the X-rays it is only necessary to refer, for while they are no better understood by the average practitioner than are other electro-therapeutic matters, their effects have been so much exploited to satisfy an excusable curiosity, that their usual effects may be said to be common knowledge. And the capabilities of this new agent is already so great, that the mere enumeration of the many things it is said to be good for in medicine would consume hours. Its most decidedly positive usefulness, however, is in locating dense or metallic foreign bodies, in outlining the denser organs, such as the heart and liver; by discovering pathologic conditions by change of density in structure, for instance the apices of the lungs in commencing tuberculosis; and in the destruction of morbid processes upon the surface of the body, when properly exposed to its influence, ending in cure, among which may be mentioned lupus, rodent ulcer, cancer, and even acne, as well as other hitherto intractable surface conditions. Even aggravated cases of inoperable cancer of the uterus, vagina and rectum are claimed to have been cured, or at least

much benefitted, by the use of specially constructed tubes. (Margaret A. Cleaves, in the *Philadelphia Medical Journal*, of April 18th, 1903.)

Naturally associated in one's mind with X-ray therapy is the rapidly developing treatment of many conditions by means of solar and electric light. This is more commonly known as the Finsen light treatment, in which, however, our own countryman, Dr. J. W. Kime, of Fort Dodge, Iowa, is entitled to a fair share of credit.

Physicists are now able to tell us that the visible spectrum of seven colors marks but a small part of the detectable solar influence after prismatic dispersion of the light ray, the strongest heat quality being found beyond the red end of the spectrum, and the most pronounced chemic effects at, and reaching far beyond, the opposite or violet end. Dr. Kime has made pictures upon negative photographic plates by means of concentrated solar light filtered through blue glass before passing through the body to the plate. He has achieved the same result through his own hand. With the daily exposure to the concentrated rays from a larger mirror upon the affected parts of the bared chest, he has favorably modified, and probably cured, incipient pulmonary tuberculosis.

One of our brethren in New York has been equally successful in laryngeal tuberculosis with the applications of the incandescent electric light directly to the throat.

A solarium is a most valuable annex to every institution for hastening convalesence. Sun baths with the body entirely naked have been found to be of the greatest value in the successful treatment of most conditions. A fact lately brought to light is that the efficacy of iron in anemia is enhanced manifold by the liberal exposure of the patient to sunlight. But that sunlight is always beneficial would be an erroneous, and sometimes unfortunate, conclusion, for this is not always so. Thus as was long ago shown, and very lately again maintained, that the germ of malaria only thrives in the light. Attention has been called to the uniformity with which malarial attacks occur in the day-time, and to their diminished severity in cloudy weather. This is now explained by the illumination of the body tissues by sunlight, or in a lesser degree by the diffused light from a clouded sky, sufficient to meet the needs of the malarial germs. On this account it has been suggested that malarial cases should be kept in the dark until cured, or at least in a room illuminated with blue light, which

seems to be deadly, or at least inhibitory, to the germ of the disease, as witness the efficacy of metheline blue, and some other remedies causing a bluing of the blood in the cure of malaria.

I may, in passing, refer to the recent increase of pneumonia, both in its prevalence and mortality, and this despite the fact that we can not treat the disease more successfully than we could not so many years ago. Creosote at the rate of one drop per hour, though not necessarily given at one hour intervals, has been claimed by many to be a specific in this disease, and there is ample evidence adduced to justify its being so considered in a certain class of cases that are not yet clearly defined. In the same way do we know the salicylates to be strikingly efficient at times in this disease, though at other times without any special effect.

We have still the advocates of hot applications, and those who favor the use of the ice bag in this disease, both claiming satisfactory results, which brings back to mind the experiments of the elder Flint, at Bellevue, many years ago, in which he divided his pneumonia cases during at least a part of one season into two classes, one receiving medicinal treatment and the other none, the mortality being the same in both groups, thus indicating that medicinal treatment was inconsequential.

Despite the many claims to the contrary, the sum total of our accumulated experience in the treatment of typhoid fever forces the inevitable conclusion that we are still without any special remedy in this disease. Cold bathing for the reduction of temperature has lately again become the vogue, and is, in all probability, detrimental to many patients where its routine use is persisted in despite its needlessness. Sponging would appear to be adequate in many instances, as has been claimed. The therapeutic claims in regard to this affection vary between the widest extremes, from those who content themselves with the reduction of hyperpyrexia by means of cold bathing or sponging, together with such medicinal treatment as may be specially called for from time to time, with good nursing, and those who use vaunted specifics with which they claim to abort the disease. Some would have us believe that they do this with castor oil, others with calomel, still others with belladonna, some again with extremely minute doses of the arsenite of copper, or of larger, though still minute, doses of the sulphocarbolate of zinc, or the use of other mild antiseptics. While I would not attempt to deny the efficacy of

any drug, even in the most minute dosage, without adequate experience in its use, it seeems to me too much to ask the mind to accept an explanation of a claim of cure for typhoid fever by sulphocarbolate of zinc in hourly doses of $\frac{1}{4}$ of a grain or $\frac{1}{4}$ hour doses $\frac{1}{2000}$ grain of arsenite of copper, by virture of their antiseptic properties. There are some who stimulate in typhoid fever, and those who do not. This disease is one of the common ones that may be said to nearly always be with us in the large cities, particularly in some, such as Philadelphia, and yet, despite our long and continued experience with it, we are no nearer an effectual remedy than we ever were, though we have the satisfaction of being able to rate it among the easily preventable diseases, inasmuch as we know its cause and mode of propagation. It may, therefore, be truly said of typhoid fever, that little, if any, real advance has been made in its medicinal treatment.

This report would hardly fulfill its mission without a reference to the magnificent progress made in our knowledge of the cause and extension of malaria and yellow fever. Concerning the latter, there was the most earnest and satisfactory discussion at the last meeting of the American Medical Association, so recently held at New Orleans, in which it was quite conclusively shown that yellow fever is only transmitted by inoculation from the bite of a variety of mosquito. This insect absorbes the poison with the blood of the sufferer afflicted with it, after which the germ of the disease requires twelve days for its development in the insect, only after which its bite will convey the disease. The great care in treating a yellow fever case, therefore, is to screen him from mosquitoes so that he may not be bitten by one that will subsequently inoculate someone else. It was shown that all attempts to stamp out the disease by cleanliness and disinfection were not only unavailing, but had little effect in checking the ravages of an epidemic. When, however, the mosquito became the object of attack, the disease rapidly lessened, and finally vanished, until we have to-day one of the most glorious achievements for scientific medicine to point to in the experience with yellow fever in the Island of Cuba, and more especially its capitol, Havana.

The soiled and unwashed bedding used for fatal cases in yellow fever were also used by non-immunes sleeping in the same bed, and in the identical room, undisinfected for a period of twenty days, without showing the slightest evidence of the disease. Yet these same individuals subsequently promptly contracted yellow fever when experiment-

ally bitten by infected mosquitoes. Thus have we stamped out a malignant disease that baffled all our therapeutic efforts by the discovery of its cause and mode of propagation, making prevention easy, an illustration of the old adage that prevention is better than cure.

Almost as much may be said of malaria regarding its origin and extension. In this, quinine has been the well-known sheet anchor for more than a century, without its mode of action being, even yet, satisfactorily explainable. Its wonderful efficiency is so great as to have robbed the disease, in most localities, of its terrors, and yet who will deny the incomparably greater advantage accruing from its prevention and stamping out, made possible by a knowledge of its cause?

Councilman, of Boston, has very recently announced his belief in having discovered the essential cause of smallpox, but whether or not he is correct remains to be shown. Here again do we have a peculiar association of conditions; a disease without specific remedy, leaving its hideous imprints upon most of those fortunate enough to escape its ravages with their lives, of unknown cause and means of propagation, and yet with a preventive almost absolute and peculiarly its own, that nevertheless finds many victims the world over, even in the most civilized communities, through reprehensible neglect to take advantage of the boon of vaccination.

The greatest advance, however, in the treatment of disease, is in the use of antitoxic serums, and of animal extracts. The most notable of the serums, I think it safe to say, is the antitoxin of diphtheria. Its efficiency can hardly be any longer questioned, though it is not universally acknowledged. Its effectiveness in diphtheria has led to much laboratory work, with the result of launching many explanations and propositions, probably the most prominent among them being Erlich's "side chain" theory of immunity. The serum treatment of disease promises to be increasingly effective in the future as its applications become better understood. The essential principle underlying this mode of treatment is to inject into an affected individual serum from the blood of another recovering, or just recovered, from the same disease, and which is, therefore, antidotal or antitoxic to the germ of that disease. With the speculation as to how immunity is developed, I have nothing to do, but will only say that it has been demonstrated beyond room for reasonable doubt, that the resistance to certain diseases with which

one may already be affected is much increased by the addition to the blood of a small quantity of blood serum taken from the circulation of another individual just over a similar attack.

The serum treatment of disease is often, but never should be, confounded with preventive innoculation, such, for instance, as is practiced in the Pasteur method in hydrophobia. Here the actual virus of the disease is enough attenuated by dilution until a small quantity can be thrown into the system without danger to life, though not without the production of more or less constitutional disturbance. It is followed by successive doses, each one less attenuated than the proceeding one, until it may be given in full strength without detriment to the individual, though this might, and probably would, have been positively fatal if given in the first instance.

The explanation of this is that the first weak dose slightly stimulates the formation of an antitoxin antagonistic to the toxin introduced. This in sufficient to neutralize a similar dose if again introduced, wherefore, this amount, plus another, can be given the second time without greater disturbance than occurred with the first. Thus is complete immunity gradually attained in successive stages. The whole theory of antitoxic serum treatment is rational, reasonable, and full of positive promise for all conditions subject to antagonism by the development of antitoxins.

While upon this subject it may be well to refer to the so-called Truneck serum, which, however, is only an imitation of what might be called a synthetic serum, as it is a watery solution of a half-dozen of the mineral salts normal to the blood. Truneck's original paper appeared in *Semaine Medicale*, of April, 1901. He devised the mixture for the purpose of supplying to those afflicted with arterosclerosis, and its entailed symptoms, the salts of which it is composed and of which the blood, in these cases, is very deficient. Dr. Alfred Gordon, of Philadelphia, in the *Philadelphia Medical Journal*, of March 21st, 1903, reports a modification of the original serum, which he finds as efficient, or even more so, than the original. In a series of twelve cases, he reports some remarkably gratifying results following the use of the "serum." Effects, as a rule, are not clearly evident until more than a week's use of the remedy. This experience also opens wide the door of possibilities in the successful use of similar combinations in hitherto intractable conditions.

Regarding the remedial effects of animal extracts, as much can be

said as for serums, with this difference, that while the serums add an extraneous antagonistic element, the extracts develop such within the body by stimulating the proper agencies for their production. This, at least, is the explanation of the theory. A mention of these substances would be very incomplete without a reference to the claims of Dr. Sajous, of Philadelphia, in regard to the so-called "adrenal system." This consists of the pituitary body, the adrenals, the thyroid, and their nerve connections. The posterior lobe of the pituitary controls the nerve connections and associations of the body, while the anterior presides over oxidation and nutrition. The thyroid secretion has, as its main constituent, iodine, of course in organic combination. This is a great stimulant of the pituitary, in fact the greatest known. The pituitary in turn stimulates the adrenals, which secrete a substance which Sajous designates "adrenoxin," and which has as its main peculiarity the property of attracting oxygen to the blood, and of inducing chemic changes in the various cells, causing oxidation, nutrition, and the liberation of energy, as well as the production of antitoxins, and increasing the germ-killing (phagocytic) action of the white blood cells. One of two large volumes in defense of this theory has already appeared, and must be said to make out a good *prima facia* claim.

We know the effects of the extracts of various parts of the body, notably those of the thyroid and adrenals, and, reasoning by analogy, are fully justified in inferring that every important organ, at least, secretes a substance having some pronounced effect upon the organism at large. What these are yet remains to be seen. That they will afford effectual means to combat disease in the future, is one of the fairest of inferences, but as to how soon this desirable advance in therapeutics will be consumated is the merest kind of a guess. I need hardly mention the effect of adrenal extract upon the heart and circulation, and of thyroid extract in myxedema and cretinism, as they are already well known.

Dr. G. W. Parry (*Lancet*, Feb., 1903) reports hereditary and acquired hemophilia absolutely cured with a few months use of 5 grains of thyroid extract three times daily. In two of these cases the persistent bleeding could not even be arrested by the local use of adrenalin chloride.

It is only fitting that I should make some reference to the "great white plague," consumption. This deadly and insiduous affliction,

for which there is, as yet, no real specific remedy, has lost much of its life-destroying power in recent years because of our better knowledge, our better understanding, of its course of the knowledge that nature is herself competent, in most cases, to successfully combat the disease if placed under favorable conditions to this end, and maintained there until the patient is well. These are rest, fresh air, and forced feeding, together with such additional auxiliaries as will be helpful. The outdoor sanatoria under state aid now existing in some of our commonwealths, are characteristic of the growing altruism of our age. We now have the cheering assurance that the preponderance of probability is in favor of any case of pulmonary tuberculosis getting well if continually kept under favorable conditions. So far as the annual saving of life is concerned, this is one of the greatest advances made in therapeutics within recent years, the importance of which is incalculably augmented from the economic point of view by the saving of productive power to the community.

I desire to say, in closing, that I mainly held myself to outlines and general statements in this report because of the extremely limited time that could be alloted to the subject, because of the equal right of others for like consideration, and the great extent of the field I had to cover. I am well aware that I have not mentioned some things, and have but inadequately touched upon others, but for such shortcomings I must again plead the time limit set by our regulations, which would prevent the reading of an entire paper of the length this would have assumed had I undertaken to give an exhaustive resume.

PROGRESS IN LARYNGOLOGY

BY B. A. WADDINGTON, M. D., SALEM, N. J.

From the standpoint of the general practitioner one of the most important recent advances in laryngology is the use of adrenaline hydrochloride for the prevention of hemorrhage from the upper respiratory tract. Under favorable circumstances practically bloodless operations may be done within the nose by spraying the parts, previous to the operation, with a 1 to 1,000 solution of this substance and the operation hence greatly facilitated. For example: One of the chief impediments to the speedy removal of a number of nasal

polypi with a snare is nasal hemorrhage, which after the removal of the first polypus coats everything within the interior of the nose with blood and renders the polypi indistinguishable from the normal structures. By first cocainizing the nasal chambers and then spraying the polypi with a 1 to 1,000 solution of adrenaline hydrochloride, so little bleeding occurs that the polypi can readily be differentiated from each other and the surrounding structures, and removed one after the other with the utmost facility. Sometimes not more than one or two drops of blood will be lost as the result of the removal by the snare of six or eight nasal polypi, and should this small amount of blood at any stage of the operation obstruct the view, it is readily removed by means of absorbent cotton.

For a bloodless operation within the nose the field of operation is best prepared in the following manner: pledgets of absorbent cotton are saturated with a 3 per cent. solution of cocaine, which with forceps is placed within the nose in contact with the parts to be operated upon and allowed to remain at least half an hour. By employing a weak solution of cocaine which remains in contact with the parts for a considerable time more profound and deeper anæsthesia of the tissues is finally obtained than if stronger solutions were used; because when strong solutions are used the capillaries contract and the tissues shrink, after which absorption goes on more slowly than if a weaker solution were used.

After the parts have been anæthetized by cocaine they are sprayed with adrenaline solution. This substance is sold by the pharmacists in 1 to 1,000 solution, but is active in the strength of 1 to 20,000. However, for important operations it is best employed in full strength of 1 to 1,000, as it is said to be absolutely non-toxic, and there is no danger of poisoning from the use of large quantities.

As the result of spraying adrenaline solution the intra-nasal tissues, already blanched and shrunken from the use of the cocaine, are still further shrunken and appear more white and bloodless than the skin. The capillaries contain so little blood that they may be severed without hemorrhage. Large exostoses or ecchrondoces may, sometimes, be removed by means of the saw with practically no hemorrhage. This, however, is not always possible, because adrenaline exerts its effect mainly upon the capillaries and has comparatively little effect upon the larger vessels; so that if in sawing through bone or cartilage a compartively larger artery is severed, the artery will bleed and spurt practically the same as if no adrenaline had been used.

Adrenaline solutions cannot advantageously be employed to control nasal hemorrhage; because the presence of blood washes away the solution when sprayed into the nose and prevents its coming into direct contact with bleeding mucous membrane. Nasal hemorrhage is probably most readily controlled by the use of peroxide of hydrogen in the manner described by Gleason, of Philadelphia. A piece of absorbent cotton is wrapped very loosely about a probe so as to form a cone about three inches in length. Its distal extremity is about half an inch in diameter and its proximal extremity about an inch and a half in diameter, the cotton being wrapped so loosely about the probe that it readily can be compressed sufficiently to enter the nasal chambers. Such a mass of cotton will take up about half an ounce of peroxide, and should be inserted dripping with peroxide into the bleeding nostril until its small extremity closes the posterior nares. Immediately the blood within the nose clots and the clots swells to an enormous size, while much gas escapes from the nostril. After the insertion of the cone of cotton within the nose, a finger tip of the left hand is placed against the cotton to steady it and the probe is withdrawn, leaving the cotton in position. If necessary, one, two or more pledgets of cotton saturated with peroxide are placed within the nostrils to make additional pressure. Under such cirumstances as this, the blood penetrates the fibers of the cotton, it is clotted by the peroxide and the clot quickly becomes large enough to exert sufficient pressure to control the hemorrhage. The more severe the hemorrhage, the more quickly is it controlled.

Because solutions of adrenaline blanch and shrink the intra-nasal mucus membrane, it was hoped that this substance used locally would prove an effective remedy for hay fever. However, this expectation has not been fully realized because of the reaction that follows its use. The blood vessels becoming more dilated than before within an hour or two after its employment. For this reason secondary hemorrhages after nasal operations are more common after the use of adrenaline than if it were not employed. The substance also is distinctly irritating, and if used at all in hay fever, should be employed only in dilute solutions 1 to 20,000, used as a spray or placed in contact with the nasal mucus membrane by means of absorbent cotton. Used in this way, it oftentimes gives satisfactory results without disagreeable after-results. It can be used as often as every hour or two.

However, the most important advances made in the treatment of hay fever is that described by Bishop, of Chicago, who pointed out the connection of hay fever with the uric acid diathesis. Bishop prepares his patients for the hay fever season by the administration of alkalies. If, in spite of his preparatory treatment, an attack occurs, he prescribes either dilute sulphuric acid or Horsford's acid phosphate, a teaspoonful well diluted after meals and at bed time.

Gleason, because of the action of nitro-muriatic acid upon the liver, advises during the attack 3 to 5 drops of concentrated nitro-muriatic acid in a tumbler of water. According to Bishop the attack of hay fever is the result of an excess of uric acid in the blood, which irritates the mucous membrane of the nose, eyes and trachea. The exhibition of an acid renders the blood sufficiently acid to prevent the absorption of uric acid.

Gleason ascribes the attack not only to the presence of urates in excess, but notes that the urine of hay fever patients is often loaded with crystals of oxalate of lime, and attributes some of the good results following the use of nitro-muriatic acid to its preventing the formation of this salt.

Whatever may be said concerning the theories of the causes of hay fever, it may often be aborted within forty-eight hours by three to five drop doses of concentrated nitro-muriatic acid after meals and at bed time in a tumblerful of water. The remedy, however, is only effective in a somewhat large proportion of cases, but if successful will show its good effects within one or two days. To prove effective the acid must be used during the entire hay fever season and the patient will feel the bad effects of omitting a single dose of the remedy. For example, should the evening dose be omitted, the patient will probably have some of the symptoms of hay fever the next morning. The acid treatment continued through two or three hay fever seasons has, in many instances, resulted in a permanent cure.

Until within the past five or six years, operations for the correction of deviations of the nasal septum were notoriously unsuccessful. At the present time we have three methods of operation yielding almost uniformly successful results—those of Asch, Gleason and Kyle. In order to understand these operations, it must be borne in mind that the entire nasal septum is never deflected, and therefore, it is more proper to speak of a deflected area of the nasal septum.

Asch, by means of special instruments, makes a crucial incision through the deflected area of the septum. The four triangular flaps are then thoroughly bent beyond the median line, and retained in the median line by means of tubes in each nares, which are worn for some time; that in the formerly obstructed nares being worn until healing is complete. Gleason makes a saw cut from below, up about the entire deviated area and then bends the quadrilateral flap consisting of the entire deflected area beyond the median line. He endeavors to fracture the bone in the neck of his flap, if bone be present, or to so thoroughly bend the cartilage, that its resiliancy is destroyed until healing is complete. This can be accomplished in rather more than 80 per cent. of the cases, so that no tube of other means of support is required during the healing process. Gleason claims as the advantages of his methods over that of Asch, that there is only one flap to bend and that is so situated that the neck of the flap generally contains bone which can be broken, so that the resiliancy of the septum is entirely destroyed and there is no tendency for the deformity to be reproduced.

He also states that the larger proportion of cases of septal deviation are the result of traumatism and that his U-shaped saw cut practically reproduces the original traumatism, so that it is really the same as if one were setting a recent dislocation or fracture of the anterior part of the septum. The Asch operation is done under ether narcosis, that of Gleason under cocaine anæsthesia. Both operations are popular both in America and in Europe.

Recently Kyle, of Philadelphia, has devised an operation which consists in the removal of wedge-shaped masses from the deflected area by means of a special instrument devised by Fiterof, resembling a short, three-cornered file. An incision by means of this instrument is made below the deflected area upon the concave side of the septum. Two similar cuts are made through the deflected area upon the convex side of the septum. It will be seen that as the result of the triangular shape of these parallel incisions, that when the septum is brought into the median line, that redundancy of the septum has been removed, and that the triangular cuts become simple, straight incisions. Kyle modifies his method of operation when the nose is twisted to one side, by making an incision through the skin of the bulge of the nose sufficiently large to enable him to introduce Fiterof's file into the nares, so that a perpendicular wedge of bone

and cartilage can be filed out of the septum at its convexity. When the nose is turned into the median line of the face, this V-shaped incision is brought together. During the healing process the parts are retained in position by means of a tube worn within the nose.

Report on Progress of Surgery.

BY CHARLES YOUNG, M. D., NEWARK, N. J.

It has seemed best to occupy the limited time allotted to this report in considering some of the questions of surgery at present *sub judice*. We will confine ourselves in the main to abdominal surgery.

Let us first direct our attention to the gall-bladder.

So long as nothing prevents this organ from emptying its contents it is almost certain to remain normal, but if an obstruction occurs, trouble is likely to ensue. Interference with drainage is sure to cause an accumulation of a certain amount of residual substance, in which large numbers of bacteria may collect, with resulting injury to the lining of the organ, at first, perhaps, simply catarrhal, but which later may become destructive to the mucous membrane, giving rise to ulceration, which may in turn result in cicatricial contraction and further obstruction. Bacterial infection conduces to the formation of gall-stones. These become additional sources of irritation with their irregular forms and sharp angles and projections. This is the theory promulgated by Albert J. Ochsner, M. D., of Chicago, in an article in *Annals of Surgery*, June, 1902. "Bacteria, especially the colon bacillus, are present with great regularity in diseased gall-bladders and in gall-stones." "Cushing has found that 30 per cent. of the gall-stone patients operated on at Johns Hospital had previously suffered from typhoid fever, and Ochsner has found that more than 35 per cent. of his cases suffered from acute or chronic appendicitis. The sequence of the infection is difficult to determine." The causes of obstruction may be various. From an analysis of forty-eight cases operated on in 1901, Ochsner directs attention (1) to the sex of the patients, there being 37 women and 11 men in the table; (2) to the age, only one of the patients being less than thirty years old at time of admission; 37 of the 48 complained especially of gastric disturbances and had been treated by a number of physicians for gastritis; (4) one-half of these patients had never suffered from distinct biliary

colic; (5) only a small proportion (25 per cent.) had ever been severely jaundiced at any time; in 25 cases no jaundice had ever been observed. Gall-stones were absent from the feces of all but a few cases. In diagnosis, then, Ochsner relies rather on (1) digestive disturbances, a feeling of weight or burning in the vicinity of the stomach after eating, gaseous distension of the abdomen; (2) a dull pain extending to the right from the epigastric region around the right side about at a level of the tenth rib, extending to a point near the spine and progressing upward under the right shoulder blade; (3) a point of tenderness upon pressure between the ninth costal cartilage of the right side and the umbilicus; (4) a history of having had one or more attacks of typhoid fever or appendicitis; (5) in many of these cases there is a slight yellow tinge of the skin; (6) there is usually a slight increase in the area of liver dullness; (7) there may be a swelling of variable size opposite the end of the ninth rib. If we have added to these symptoms the biliary colic, followed by distinct jaundice, and possibly by the passage of gall-stones, our diagnosis is further confirmed. The danger of operating is not approximately the same before and after the occurrence of complications. The series of operations shows that all cases recovered if operated on previous to the occurrence of complications. Mayo Robson, in his excellent work on this subject, gives a list of twenty-eight complications which may follow or accompany the presence of gall-stones. Ochsner lays down the principle that unless the acute condition is complicated with a mechanical obstruction of the intestines, the patient's chances for recovery from the acute attack are always better without than with an immediate operation. It is necessary to make a definite distinction between intestinal obstruction due to peritonitis and the same condition due to a mechanical condition, such as the impaction of a gall-stone. The former condition is so much more common than the latter that it is only very seldom that the latter need be considered.

To the *Annals of Surgery*, June, 1902, William J. Mayo, M. D., Rochester, Minn., contributes an article presenting an analysis of 328 operations upon the gall-bladder and bile passages. The operations were done at St. Mary's Hospital, Rochester, between June 24, 1891, and February 28, 1902. Three hundred and eleven were of benign origin, and the number of deaths was eight, about 2½ per cent. Seventeen were for malignant disease, with three deaths, a mortality

of nearly 18 per cent. The after-history of many of the cases leads to the belief that for cases in which the cystic duct has been obstructed or in which stones have been lodged in the duct for a length of time, cholecystotomy is insufficient, and that the gall-bladder should be extirpated at the primary operation if the patient is otherwise in good condition. In thirteen cases stones were found outside of the gall-bladder and biliary ducts There were no deaths. In some cases the calculi were encapsulated in the adjacent liver border, forming hard nodules, which were enucleated by incision. In others, a mass about the fundus would contain a number of stones with, perhaps, some muco-purulent fluid. Further dissection towards the cystic duct would open a fluctuating organ of small size, with every evidence that it was but the remains of the gall-bladder. In some cases the gall-bladder is perforated, the extruded stones in a mass of adhesions communicating freely with the fundus, or perhaps with several such pockets lined with granulation tissue and more or less separated from each other. Stones were found lying in a pocket outside the gall-bladder, with adhesions to the intestines but communicating with neither; the fundus contracted to a mass of scar tissue. In three cases stones were found outside of gall-bladder, with no communication with it, but with a fistulous opening into the intestine, twice to the duodenum and once to the colon. Mayo says that "a study of these cases leads to the belief that stones passing by ulceration and perforation from the gall-bladder and cystic duct to the intestines do so slowly, and often, if not usually, cicatrization takes place behind before the extrusion into the intestine is accomplished." The next most common direction for gall-stones to travel is towards the surface of the body. Of cholecystitis there were 34 cases with 3 deaths. This mortality shows the serious nature of the infections. The cases may fairly be divided into suppurative and catarrhal cholecystitis. In the catarrhal variety cholangeitis was more frequently an accompaniment, although usually of a mild and irregular type, and after the operation in three cases there was an extension of inflammation and death resulted. In the suppurative form the gall-bladder was comparable to a closed cavity containing pus, and so thoroughly blocked at the cystic duct as to prevent progressive infection. Two cases of acute empyema, in which the stone was removed after great difficulty, developed a fatal suppurative cholangeitis after cholecystostomy. One of these cases also had a profound jaundice with purpura hem-

orrhagica. In the other cases the removal of the impacted stone allowed the septic material to penetrate the ducts. In the four cases in which the gall-bladder was drained, and on account of the serious condition of the patient, no attempt was made to remove the obstruction, each one recovered promptly, and the stone was removed at a secondary operation with the gall-bladder. The danger in these cases is in progressive infection of the ducts. In acute infections, little manipulation should be made and quick drainage established. "Unless it is necessary to remove the gall-bladder, it is not wise to break up adhesions beyond a point necessary to explore the ducts and manipulate the fundus. They are valuable barriers to the extension of the inflammatory process and infection." Jaundice in connection with stones in the common duct was a most variable feature. In many cases it was so slight as not to attract especial attention, and the finding of stones in the common duct was a surprise. In the majority the jaundice was marked. Courvoisier long ago called attention to the fact that jaundice from stone in the common duct was accompanied by a contracted gall-bladder, which could not be palpated externally in 80 per cent. of the cases. This was true in all but three of Mayo's cases. In these three the gall-bladder was filled with stones, preventing the usual contraction. In three cases capillary oozing was a most serious post-operative complication. One case was in a precarious condition for twelve days from this cause. Robson has called attention to the value of calcium chloride as a prophylactic. Mayo had no deaths from hemorrhage after using it. Three cases of Jaundice from malignant disease died from post-operative capillary oozing. In all of these cases there were sub-cutaneous ecchymotic spots, looking like purpura hemorrhagica. No case in which this condition was not present died from this cause. Of the eight deaths in the benign cases, four were due to progressive infection of the twin ducts, with kidney complications, one from the same cause with capillary hemorrhage, and one sudden death due to myocarditis. Two cases died suddenly on the fourth day. The symptoms after the operation consisted of a peculiar nervous unrest, pulse 110 to 120, temperature 100° to 102°, gastro-intestinal disturbance not marked, but some tympanitic distension shortly before death, which took place unexpectedly. Post-mortem did not show adequate cause for the result. The condition seems to correspond with that described as hepatargia, and due to cessation of liver action.

The cases belong to the group of cholecystitis without stones. In not a single case was peritonitis the cause of death. In a paper published in the *British Medical Journal*, January 24, 1903, B. G. A. Moynihan, M. D., F. R. C. S., discusses cholecystectomy. Removal of the gall-bladder was first performed on July 15, 1882, by Langenbuch. It is an operation comparatively rare in the surgery of the bile passages. It is called for in the following conditions: (1) In injuries of the gall-bladder, rupture, stab or bullet wounds; (2) in gangrene of the gall-bladder; (3) in phlegmonous cholecystitis; (4) in membranous cholecystitis; (5) in chronic cholecystitis with dense thickening of the walls of the gall-bladder and cystic duct, with or without stenosis of the cystic duct, and in chronic cholecystitis, when the gall-bladder is shriveled and puckered and universally adherent. In such cases it is no longer a receptacle of the bile; (6) in distension of the gall-bladder, hydrops or empyema, due to blockage of the cystic duct by calculus, stricture, growth or external inflammatory deposits; or in case of mucous fistula following operations for these conditions; (7) in cases of fistula between the gall-bladder or the cystic duct on the one hand and the stomach, duodenum or colon on the other; (8) in multiple ulcerations of the gall-bladder or the cystic duct, when gall-stones have eroded their way through the walls into the liver, the duodenum or other protective adherent masses; (9) in primary carcinoma of the gall-bladder. In all these conditions the removal of the gall-bladder is either imperative or desirable. Kehr, whose experience of the surgery of gall-stones is unrivalled, has recommended, as a routine measure of the treatment of cholelithiasis the removal of the gall-bladder and the drainage of the hepatic duct. The recurrence of gall-stones in his patients lessens with the increasing experience of the operator, and is best guarded against by a complete exploration of the ducts in all operations. If this be done, the surgeon will occasionally find a stone or stones in the hepatic, or common duct, and when no symptoms have been elicited by their presence there. The complete and minute examination of all the ducts is quite easily performed, if the ordinary vertical incision be prolonged upward along the costal margin, and the liver rotated by a gentle traction in a forward and upward direction upon the gall-bladder. In cases of recent acute or sub-acute cholecystitis due to blockage of the cystic duct by a large stone, removal of the gall-bladder is certainly not necessary. The gall-bladder should never

be removed unless the surgeon is convinced that the common duct is patent. Mayo, of Rochester, Minnesota, has suggested a modification of cholecystectomy, which has met with some favor. It is performed in cases of permanent obstruction of the cystic duct; the common duct being permeable, and consists in the removal of the entire mucous membrane of the gall-bladder. The mucous membrane at the fundus is separated with some difficulty, but at, and near the neck it strips away readily. After its removal, the other coats are stitched to the upper angle of the wound. The chief advantage claimed for this operation is, that it is more readily performed and is, therefore, a less serious procedure.

In an article on surgery of the gall-bladder in *The Journal of the American Medical Association*, January 24th, 1903, Alexander Hugh Ferguson, M. D., of Chicago, speaks of the symptoms of cholecystitis, and says: "the most characteristic evidences of the disease are manifested by suffering and jaundice with their associated symptoms and signs. The sudden onset of regional pains and tenderness, with or without apparent provocation, lasting from a few minutes to several hours with little or no pyrexia and normal or slow pulse: the pain and tenderness stubborn, unyielding to applications of moist heat or internal medication and subsiding as suddenly as they began, *is a clinical picture of a stone, or stones, becoming impacted in the cystic duct and again receding into the gall-bladder.*" The positive sense of the pain is undoubted by the patient and the higher sensibility in the gall-bladder guarded by a tense right rectus muscle, is easily demonstrated by the surgeon. The pain is sudden in its onset; its seat is sometimes far distant from the gall-bladder; it may follow some exertion which increases intra-abdominal pressure. But when the surgeon makes pressure over the gall-bladder during an attack of colic, it always elicits local tenderness and increases the intensity of the local and referred pain. Should the pain continue and jaundice ensue, the stone is evidently obstructing the main duct.

In sixteen of Ferguson's cases, there was no clinical history of gall-stones except gastro-intestinal disturbances. Twelve of these had dropsy of the gall-bladder, and the stone or stones in each were very large and latent, producing no pain. Mr. Jordan Lloyd has tersely described the value of giving a prod over the gall-bladder with the closed fist. If gall-stones are present, considerable pain may be caused. By auscultating over the gall-bladder, the friction sound of

local peritonitis and perihepatitis is detected. "During the acme of colic the gall-stones may occasionally be heard striking against each other." Ferguson has distinctly heard it. Examination of the blood for leucocytosis is sometimes helpful. Waiting for the attack of colic to pass off proved fatal in two cases that came under the observation of Dr. Ferguson. Dr. Ferguson says: "If infection is present, the sooner the gall-bladder is attacked and drained the better." "Early operation shortens suffering, prevents complications and obstructions of the ducts." "No case should be allowed to become chronic." "Early gall-bladder surgery is safe and easy, while late operations are dangerous and difficult." "The physician has no assurance from clinical experiences or pathologic findings, that in a given case the attack will subside without causing: (*a*) jaundice by obstruction of the common duct, which may remain until relieved by a serious operation; (*b*) rupture of the gall-bladder; (*c*) ulceration and perforation by pressure of the stones; (*d*) death by the severity of the colic; (*e*) empyema, and (*f*) acute phlegmonous inflammation, and (*g*) gangrene." During operation a probe is unreliable for detecting the patency of the ducts. The patency may be proved by forcing water through them. Dr. Van Hook first employed air for testing the patency of the ducts. Air is always available medically pure, and quickly balloons the duodenum. It is the quickest and most satisfactory test. Any rubber bulb that holds 4 or 6 ounces may be employed.

In the discussion that followed the reading of this paper, Dr. W. J. Mayo, Rochester, Minnesota said: "That in his experience, by cutting the gall-bladder loose from the liver, it can usually be drawn out of the wound, exposing the ducts. This allows the liver to recede and gives more room. As to adhesions, I would warn against their extensive division in acute infections if they are not giving trouble, as they are a good barrier to the extension of the infection. Drainage of the hepatic duct is very important." Dr. James E. Moore, Minneapolis, said: "In diagnosis, local tenderness is a prominent feature. Robson pays great attention to this point, and the Mayo-Robson point should be as familiar to us as the McBurney point." Dr. Robert F. Weir, New York, advocated the placing of a small pellet of methylene blue in the gall-bladder just before the drainage tube has been put in position. If the tube is patent, it will escape promptly into the intestines and color the feces.

Six cases of general peritoneal infection are noticed because of the opinion prevailing among the profession that practically all such cases terminate fatally. J. B. Murphy, M. D., Chicago, reports them in a paper in the *Journal of the American Medical Association*, April 11, 1903. He asks, "What are the conditions which produce the fatal result?" 2. "Can these conditions be overcome by medical or surgical treatment, and, if so, when and how?" The result of a general peritoneal infection depends on the following: (*a*) *The type of infection.* If it be a virulent streptococcus type, with little pus formation, the peritoneum is rapidly denuded of the epithelial covering and becomes a blistered surface, through which absorption rapidly takes place. Death is caused by the large quantity of the products of infection rapidly absorbed. If the poison be diluted, or the pressure under which the infective products are retained be reduced, the patient may pass over the critical period to a convalesence. If it be a staphylococcus or a colon bacillus infection, the denudation of the peritoneum is slower, the danger of immediate overpowering of the patient by the absorbed toxins is diminished and the fatal termination is postponed often to four or six days, until such time as the fibrinous exudate which covers the peritoneum is exfoliated, taking with it the peritoneal endothelia. A rapid and fatal absorption may then ensue. (*b*) *The period of time* that elapses between the infection and the time of operation. If this is postponed until patient is in collapse, the case will terminate fatally. If it be performed in the early stage, the peritoneal shingles or endothelia will be found intact, thus preventing absorption. When these natural barriers to absorbtion are destroyed, as is the case when operation is delayed, a fatal termination cannot be obviated. (*c*) *The tension* under which the products of infection are retained in the peritoneal cavity. The mere presence of pus does not necessarily mean absorption of the infective products. The greater the pressure under which the pus is held in these acute conditions the more rapid the absorption. Reduction of pressure is one of the basic principles of treatment of general suppurative peritonitis. We believe that irrigation is not necessary in the peritoneal cavity any more than it is necessary in circumscribed suppurations of other tissues. (*d*) The diffusion of infective material through the peritoneal cavity. It is well known that when diffusion takes place in the upper half of the peritoneal cavity the danger is enormously increased, because absorption from this part is

much more rapid than from the lower or pelvic portion. Hence patients were kept in the semi-sitting position, at an angle of 35°, from the time they came under observation, both before and after the operation, until the pus was entirely removed. In all cases an effort was made to allow the pus to settle into the pelvis, where it could be free from pressure and could be easily carried off by the drainage tubes. Absorption took place slowly, and the patients were saved from the primary, overwhelming dose of toxins, which is so fatal. (*e*) *The administration of antitoxins and other substances* to antidote or dilute the immediate depressing effects of the poisons absorbed from the peritoneum. Antistreptococcus serum and unguentum Credé were administered, and saline transfusions were given occasionally. (*f*) *The length of time the patient is kept under the anæsthetic*, and the extent of the manipulations of the intestines and other tissues to which the patient is subjected during the operation.

Case 1.—The patient was in third week of a well-defined attack of typhoid fever. At 3 P. M. on day of admission to the hospital he had sudden, severe, sharp pain in region of umbilicus. Pain soon became general over lower abdomen. In conveying patient from house to hospital he was kept in a semi-sitting posture, and this position was maintained on the table during the operation. At 10 P. M. abdomen was opened. Incision through right rectus. As soon as peritoneum was incised a large quantity of yellowish green fluid containing flakes of lymph welled out of the opening. The fluid was free in the peritoneal cavity, and there were no adhesions. Entire peritoneal surface was deeply congested and covered in places with patches of exudate. The lustre and gloss of the membrane were preserved. Twelve inches from the cæcal valve a perforation was found in the ileum 4. 5. M. M. in diameter, through which contents of ileum were escaping. Perforation was closed and incision closed in separate layers. Fluid was not sponged out. Two rubber drainage tubes one-half inch in diameter were inserted deep into pelvis, and came out through lower end of incision. Through these tubes the pelvis was irrigated with normal saline solution, and a large quantity of greenish fluid escaped. Patient was returned to his room at 10:40 P. M. and placed in bed in a semi-sitting posture at an angle of 40°. This position was maintained for ten days. The patient was discharged with wound almost entirely enclosed December 12, twenty-five days after admission.

Case 2.—This was one of *perforative peritonitis* of three days duration on admission to hospital. *Operation*—Abdomen opened by ordinary appendiceal incision at outer edge of right rectus. When peritoneum was opened pus and gas shot out, so great was the tension. Appendix was gangrenous and perforated. It was removed and large drainage tube was inserted into pelvis and right iliac fossa. No abdominal sponging or irrigation was used. There was no attempt on the part of the intestines or omentum to wall off the infective process. The bowel retained some of the natural gloss, but the pus was very offensive and the case did not look promising. Abdomen was closed down to drainage tubes. Patient was placed in bed in the semi-sitting posture. Repeated saline enemata were administered and large quantities of fluid given by the mouth immediately after the patient regained consciousness. Recovery was uninterrupted.

Case 3.—Patient was taken ill suddenly on October 9, 1902. Dr. Murphy saw her October 12, and concurred in advising immediate removal to hospital. Eighty-four hours after onset abdomen was opened. Pus welled out. There were absolutely no adhesions anywhere in the peritoneal cavity. No fibrous exudate on intestines; no effort at agglutination. Appendix was amputated, abdomen closed, large drainage tubes inserted; no irrigation or sponging of pus. Peritoneum showed considerable congestion, but normal gloss was retained. Patient was put to bed in semi-sitting posture at angle of 35°. With each inspiration pus welled out of the tubes from the pelvis. October 17, discharge profuse and quite offensive. Patient was discharged November 23 with wound almost healed.

Case 4.—Patient's illness began October 18, 1902. Operation performed October 21. On incising peritoneum pus welled out and was found to be free in peritoneal cavity; no adhesions except immediately around the appendix; peritoneum intensely congested and covered in places with fibrinous exudate. The gloss was preserved except in certain areas where congestion was most intense. Appendix was gangrenous and perforated on one side into the free peritoneal cavity. A large fecal concretion was found free. Appendix was amputated and stump buried. Two drainage tubes were inserted, one into pelvis, the other into right iliac fossa. No sponging nor irrigation used. Abdomen closed in separate layers. Patient was placed in bed in semi-sitting posture. Patient made an uninterrupted recovery.

Case 5.—Trouble of four days duration. When admitted to the hospital abdomen was moderately distended and extremely tender all over. Breathing was almost entirely costal, and the abdominal muscles held so rigidly that deep palpation was impossible. On piano percussion there was dullness extending almost to umbilicus. Absence of peristalsis all over abdomen. On opening the abdomen it was found to contain a large quantity of yellowish pus, possessing a slight odor. Appendix was gangrenous and perforated. The intestines were everywhere bathed in pus, but, though considerably congested, they everywhere retained their endothelial covering. Appendix was removed. Pus was not sponged out nor abdomen flushed. Time of operation twenty minutes. Patient was placed in bed in semi-sitting position. Patient made a perfect recovery.

Case 6.—One month previous to present attack, patient had an attack of appendicitis lasting four days, and apparently completely recovered. He worked steadily until time of present attack, which began at 3 A. M. He was awakened by sharp pain in abdomen and vomited. He had no chill. Temperature was not above 100°. In the morning he walked to the hospital accompanied by his attending physician. Pain was still severe and abdominal muscles rigid, especially on right side. Tenderness to pressure over abdomen was general, but not very acute. A diagnosis of acute appendicitis without perforation was made, and he was immediately prepared for operation. To the surprise of the surgeon the abdominal cavity was found to be full of pus, with some gas. There was a perforation of the appendix. The perforation had been capped with omentum, but the cap had been partially torn off and the contents escaped into the peritoneal cavity. Peritoneum was not blistered and gloss was not seriously disturbed. The lower half of abdominal and pelvic cavities contained large quantities of pus. Appendix was amputated, two large drainage tubes were inserted into pelvis. With each inspiration pus welled out of the tubes. Patient was placed in bed in semi-sitting position. Patient left hospital cured in twenty-nine days from time of admission.

At a meeting of the New York Surgical Society held January 14, 1903, Howard Lilienthal, M. D., presented a patient whose history was that for several years she had suffered from diarrhœa accompanied by hemorrhages and passage of foul mucus from the bowels. She finally became so weak and anæmic that another surgeon had

done a left-inguinal colostomy for the purpose of giving a rest to the lower colon and rectum. Operation had revealed the fact that the walls of the bowel were covered with polypoid growths, which bled easily even on gentle manipulation. Patient was much benefited by the operation, and it was finally thought best to close the artificial anus. As soon as she left the hospital the old trouble returned. She had as many as twelve stools daily, much abdominal pain and vomiting. Dr. Lilienthal then opened the caput coli in order to give colon as much rest as possible. Colon throughout its whole length was found filled with polypoid masses. Examination of them showed them to be hypertrophied solitary follicles. Irrigations and injections were tried, but did not relieve the condition. Exclusion of entire colon from the alimentary tract promised the greatest relief with least degree of risk. Consequently an end to end ileo-sigmoid-ostomy was performed. Following this the patient's condition rapidly improved, but she insisted on having the colostomy wound closed, for it still discharged. This necessitated the entire extirpation of the colon and stump of the ileum. This was done in June, 1900, and since then the woman has been perfectly well. Immediately following the operation she had a number of liquid movements daily, but the number gradually diminished, and now she usually has two daily. The entire colon was extirpated with the upper part of the sigmoid figure, and four inches of the ileum.

At the same meeting Dr. Robert H. M. Dawbarn presented a patient under treatment for amœbic dysentery. Following Dr. Weir's suggestion he had opened the appendix, which fortunately proved to be large and was irrigating the large intestines. A 1 to 10,000 solution of permanganate of potash (ten pints) was given, alternating every six hours with the same quantity of normal salt solution at a temperature of 120 degrees F. So far the result is highly satisfactory. The soreness has practically disappeared, and the amœbic character of the discharge was wholly at an end. Dr. F. Kammerer emphasized the importance of putting the bowel completely at rest in the treatment of these obstinate cases of colitis. He thought the result not as good if the feces were allowed to travel through the colon. He referred to a case which he showed at a recent meeting of the Society, in which he had established an artificial anus, with spur-formation for about three months. *In the Annals of Surgery*, May 1903, Mayo Robson reports a case of ruptured crucial ligaments of

the knee, repaired by operation. A miner, who received an injury thirty-six weeks before, was admitted November, 1895, to the General Infirmary, Leeds, on account of lameness from weakness and instability of right knee. Knee was swollen, but free from tenderness on manipulation. Head of tibia could be brought forward in front of femur, and there was very free lateral movement of head of tibia on the femur, motion backward being limited only by ligamentum patellæ. Some fluid in the joint. Operation: Incision starting over most prominent part of internal condyle, down and out, crossed ligamentum, patellæ about the middle and extended up to prominence of external condyle. Both ligaments (crucial) were found torn from their upper attachments. They were stitched by catgut ligatures, the anterior to the synovial membrane and tissues on the inner side of the external condyle, and the posterior which was too short, and was split in order to lengthen it, was fixed by sutures to the synovial membrane and cartilage on the outer side of the inner condyle. Wound was closed; no drainage; some pain and effusion followed operation. Plaster of Paris was applied after stitches were removed. October, 1901, the leg was perfectly strong. He walks without a limp and can run. He works daily at mining. There is no abnormal mobility. Extension is normal, but flexion limited to a right angle. On extension and flexion fine creaking is felt in the joint. "Since reporting above case, adds Mr. Robson, I find another case was operated on August 5, 1898; in 1900 the result was quite satisfactory." The editor of the "*Annals*" says in a foot note, "Mr. William H. Battle, in the *British Medical Journal*, December 15, 1902, refers to Vol. XXXIII of the Transactions of the Clinical Society of London, p. 232, where is described a suture of the crucial ligaments as a part of the procedure adopted in the treatment of an irreducible traumatic dislocation of the knee-joint in which an open section was made. This was done August 5, 1898. The result was good.

Annals of Surgery, May, 1903, p. 709. *A case of an end-to-end anastomosis of the Popliteal Artery for gunshot injury.* On October 20, 1902, E. R. W., 38, was received into Chicago Hospital, having been shot in each thigh four hours previously. Whole right limb was swollen; 3½ inches larger above patella and from 1 to 2½ inches around calf and thigh than opposite leg; swelling was increasing. Pallor of foot, but color around knee darker than

normal. Superficial veins engorged. There was loss of function, loss of sensation and motion of foot. Foot and leg felt cold, but he said they felt hot and numb. Pressure on any part of leg caused him to complain of pain. It hurt him to have limb moved. There was diffuse pulsation in popliteal space, seen and felt. A systolic bruit was heard behind the knee and a thrill was felt. The track of the bullet was cut into, and the femur found to have been penetrated at its inner edge about 2 inches above patella. Tourniquet was applied to thigh. Long incision exposed popliteal artery along its whole length. Liquid and coagulated blood was removed. The artery was found to be completely severed at the junction of upper and middle third, except a few shreds of the outer coat next the vein. The operator, Alexander Hugh Ferguson, M. D., tied slips of gauze above and below the injury of artery and removed tourniquet. Lacerated ends of vessel were removed. Anastomosis by invagination was then carried out. Upper end was introduced into the lower, a distance of a quarter of an inch, and held there by four retention sutures of fine silk, and the free end of the lower end sewed around the upper with a fine continuous suture. Temporary ligatures were then removed. Pulsation at the ankle was restored at once. Pallor disappeared and foot became warm. A broad flap an inch wide from the semi-membranosus muscle was lapped around artery at seat of union. The next day sensation had returned in limb. Forty-one hours after operation a sudden, severe, throbbing pain was felt in calf. Foot suddenly changed color and sensation disappeared. When Dr. Ferguson saw him five hours after, pulsation in the anterior tibial artery was gone. Dry gangrene ensued. On the ninth day a clear line of demarcation was evident; the toes, a strip down the sole of the foot, and a patch on the heel the size of a silver dollar, were dead. On the 31st day the toes, the ends of the metatarsal bones, a broad strip along the sole and the necrosed patch in the heel were removed. This proving unsuccessful, on the 51st day the foot was removed at the mediotarsal joint. The patient is now well, using his foot and attending to business. In February he complained of inability to straighten limb. The entire scar tissue was dissected out. The artery was examined. Pulsation was seen and felt above and below as well as at the site of the anastomosis. In looking over the literature, Dr. Ferguson has failed to find a report of a similar case. To the *New York Medical Journal*, June 6, 1903,

Dr. Geo. M. Edebohls contributes a paper on Renal Decapsulation for Puerperal Eclampsia. The object is to present renal decapsulation as a further resource in the treatment of puerperal eclampsia of renal origin. The renal origin of the eclampsia is insisted upon as decapsulation is manifestly out of place if evidence of kidney involvement is absent. History of case is, briefly: primipara, twenty-three, symptoms of nephritis first noted during seventh month, uræmia and convulsive seizures during the eighth month; near the end five severe convulsions within sixteen hours, followed by forced delivery during fifth seizure. Freedom from convulsions for forty hours after delivery, then return of convulsions. Six severe convulsions and several minor ones occurring in eighteen hours. Decapsulation of both kindeys was performed in twenty-three minutes under chloroform. There was no tension of capsules, but both kidneys in acute and subacute inflammatory condition. Capsules were easily separated and cut away close to renal pelvis. No further convulsions, and in two days patient, though weak, was in normal mental condition. Recovery was uninterrupted. She has since enjoyed as good health as ever. Eleven days after operation urine showed a few casts and $\frac{1}{4}\frac{1}{0}$ of 1 per cent. albumen. A month later there was only a trace of albumen and an occasional hyaline cast. Eleven weeks after operation urine was normal.

Renal Decapsulation.—In the *Medical Record*, March 28, 1903, Dr. George M. Edebohls reports his experience with his method of renal decapsulation for chronic Bright's disease. It includes a total of fifty-one cases. A number of these are reported in detail. There were fourteen deaths, seven within fifteen days of the operation. Three of the seven deaths of operative mortality were due to uræmia, two to acute dilatation of the heart, one to pneumonia, and one was caused by uræmia and cerebral hemorrhage. He had been obliged to operate on cases almost moribund. He does not consider the mortality a serious one. The greatest danger is from the anæsthetic. Of the remaining patients, two did not show satisfactory improvement, twenty-two are in various stages of satisfactory improvement and progress toward health at periods varying from two to fifteen months after operation. They had not as yet passed the probationary period of six months of normal urine, before the expiration of which no one is entitled to a place on the list of cures. Nine patients were cured and remained cured in periods varying from one year and nine

months to ten years. One patient operated on with one kidney had a repetition of chronic Bright's disease after four years. He thinks there are two important facts to be recognized: first, that chronic Bright's disease in its early stages, at least before serious and fatal damage has been done, is curable or susceptible to amelioration by renal decapsulation. The second is, that, in competent hands, renal decapsulation in the early stages of chronic Bright's disease is attended with little or no risk to life.

In the *Journal of the American Medical Association* H. J. Whitacre, Cincinnati, reported a case of *suppression of urine, enduring eight days, and relieved by decapsulation of the kidneys.* A woman of forty had previously been in good health. Illness began with attempt at criminal abortion; first by taking drugs, afterwards by introduction of a catheter. Following abortion, suppression of urine occurred. During first twenty-four hours, a few ounces of bloody urine were passed. Suppression lasted about eight days. Decapsulation was then done. Right kidney was found very much reddened and congested, and had a mottled appearance. On incising capsule the cortex bulged. Capsule was stripped off. Cortex was so friable that the slightest touch lacerated it. During first twenty-four hours after operation patient passed twenty-one ounces of urine; her condition decidedly improved, and the quantity of urine increased until she was passing sixty ounces, and a complete recovery followed. Nine weeks after operation she was quite well and attending to her household duties. The cause of suppression was attributed to vaso-motor constriction of the capillaries from the emmenagogues or reflexes. It was certainly not a symptom of acute nephritis.

It is a matter of sincere regret with the reporter that he is unable in so limited a time to give an adequate idea of the wealth of material that he has had at his disposal. He has had to choose between making indifferent excerpts of numbers of articles or of devoting his attention to a few.

PROGRESS IN BACTERIOLOGY.

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The attempt to cover, even superficially, the entire ground worked over by bacteriologists in the recent past, would be attempting the impossible. Although bacteriology is one of the youngest of the

sciences, the very important results which have followed its study, especially in the field of preventive medicine, the recognition of the part that these minute organisms play in the economy of nature, and the growing belief that problems of far greater importance than any which have so far been attacked remains to be solved, has stimulated a very large number of investigators to earnest and careful work in these directions.

I will confine myself this evening to a brief consideration of the present state of the bacteriology of a few of the more important transmissible diseases.

The recent address by Koch,[1] before the International Tuberculosis Commission, in which he takes the ground that human and bovine tuberculosis are caused by different organisms and that infection of man by bacilli derived from bovine sources does not occur, has raised a storm of protest in this country and abroad. The work of Trudeau, Ravenel[2] and others, and the numerous cases cited by Ravenel,[3] Kraus,[4] Hüls[5] and many others, show beyond doubt, that the position taken by Koch is untenable, and that man is capable of being infected with tubercle bacilli from bovine sources. Cases where tubercle bacilli from human sources have caused tuberculosis in animals are still more numerous. Adami,[6] whose researches in this direction should give his opinion great weight, sums up the situation as follows :

"Bovine tuberculosis can be, and usually is, transmitted from cattle to cattle by inhalation or contamination from various discharges. Human tuberculosis is likewise transferable to cattle, but is not markedly virulent except as a mixed infection. Certain breeds of swine show more marked susceptibility than others to this form of infection."

"Human tuberculosis is usually transmitted from man to man, and the organism of human tuberculosis varies somewhat culturally and pathologically from the bovine variety, but not to the point that we should be justified in regarding them as two different species.

"Bovine tuberculosis may be transmitted from cattle to man either through wounds, or through the alimentary canal by food, the latter form of infection being limited almost entirely to children. Milk infections probably take place only in those cases where the milk is obtained from cows in which the disease is advanced and the bacilli are present in the milk in large numbers.

"Animals showing either physical signs of tuberculosis or reaction to tuberculin should be killed."

Adami's statement regarding infection from tuberculous milk seems open to question. Mohler[7] has made an exhaustive investigation of a herd of cattle at St. Elizabeth Asylum, D. C., and finds that the tubercle bacillus can be demonstrated in the milk from tuberculous cows whose udders show no perceptible evidence of the disease, and that the bacillus can be secreted in such an udder in sufficient numbers to produce infection in experimental animals, both by ingestion and inhalation. Cows secreting virulent milk may be affected with tuberculosis to a degree that only can be detected by the tuberculin test. It would seem, therefore, that any cow reacting with tuberculin may be capable of producing infected milk, even though she shows no physical signs of the disease. This very careful work of Mohler's contradicts the statements of many earlier observers who contended that the milk from a tuberculous cow would not contain the specific bacillus unless the udder was involved, but it throws no light on the actual frequency of infection from milk. Kober,[8] from a study of a collection of cases of tuberculosis attributed to milk, concludes that the evidence indicated that milk spread the disease, although the danger was not as great as was commonly supposed. Rosenau[9] has recently shown that a good growth of the human variety of the tubercle bacillus could be obtained on the surface of certain fresh fruits and vegetables in common use. That this often happens outside the laboratory is somewhat improbable on account of the narrow temperature limits within which the tubercle bacillus will grow; it may be, however, that the bacillus can be transmitted from man to man through these media.

Ever since the discovery of the tubercle bacillus by Koch, the goal toward which all investigators have been striving, has been the attainment of a cure for the disease. The first attempt made in this direction, made by Koch himself, was a method of immunization supposed to be produced by the inoculation of a glycerine extract of dead tubercle cultures. This method, slightly modified, has recently been reintroduced by him, and, while in certain carefully selected cases it may do good, yet in the vast majority of instances it is of no avail, or even dangerous. This obtains especially with Tuberculin T. R., which has been shown by several observers to contain at times living and virulent bacilli. Trudeau[10] in a review

of recent work in this direction, says that evidence tends to show that the attainment of a certain amount of immunity (toxine immunity), does not protect against reinfection; whatever immunity is produced experimentally is bacteriolytic. A living germ seems necessary to produce whatever degree of immunity as has been already attained experimentally.

The great majority of mankind possess in greater or less degree a natural immunity, but this is only relative, and is maintained only as long as the health is kept up to a certain standard.

The production of a specific anti-toxine has not met with much success. The most promising attempt sseem to be those of Marigliano and of Fisch, who report improvement in many cases treated with their respective sera. It seems probable that some curative action may be expected from sera obtained from immune animals if a high enough degree of immunity can be obtained.

An interesting contribution to the serum reaction of tubercle is given by Prof. A. E. Wright.[11] Some years ago Arloing and Courmont showed a way out of the difficulty, met with by former observers, of obtaining a culture free from clumps. Later Koch introduced an improved technique, which consisted in grinding up the tubercle bacilli after sterilization of the culture under alcohol. The resultant mass when examined microscopically consists of irregular detritus with here and there an intact bacillus. This powder is suspended in normal salt solution by grinding in an agate mortar, and centrifugating to remove the larger masses, and the resulting opalescent fluid used in making the test. It is doubtful if this method will ever be of value in the routine diagnosis of tuberculosis. It should always be remembered that a negative result in any serum reaction may mean one of three things; the absence of the particular bacterial invasion suspected, the purely localized nature of that invasion, or the absence of the power of immunizing response on the part of the organism. The tubercular process is, in the earlier stages at least, a purely local one, and we can expect little from the serum reaction. It becomes of importance, however, in determining the response of the organism when anti-tuberculous innoculations are being practised.

There is little new concerning the bacteriology of typhoid fever, except the recent developments in the serum therapy of the disease. Two distinct methods of treatment which makes use of the bacillus

typhosus as a starting point, have been developed. One is a process of protective inoculation, which consists in the injection of a certain amount of dead culture of the bacillus, usually in divided doses. A decided reaction ensues and in most cases a considerable degree of immunity is developed. This method of immunization has been extensively practiced in the English army in India and South Africa, with excellent results. Wright[12] states that the mortality and also the liability to infection in vaccinated over unvaccinated troops is reduced from two to twenty-eight fold. The duration of this immunity has not yet been determined with any accuracy.

A curative serum has been produced by Chantemesse and others which recently seems to have been giving good results. Chantemesse[13] states that in the General Hospital in Paris, where cases were not treated with the serum, out of 1,192 cases treated, there were 286 deaths, a mortality of 19.3 per cent. In two other hospitals in Paris where the serum was used, the mortality was in one case 3.7 per cent., and in the other under 6 per cent. Fiessinger[14] reports 300 cases treated with anti-typhoid serum with a mortality of 9 per cent. The difficulty in preparing an active serum seems to be that, owing to the toxic products which produce immunity being locked up in the bacterial cell, it has been difficult to get enough of the toxin absorbed by the animal to produce a high degree of immunity. Some recent work of MacFadyen may overcome this difficulty. He grinds the typhoid bacilli at a temperature of liquid air, to extract the intracellular juices which contain the toxic principle. The grinding is stated to be so thorough at this temperature that the mass becomes sterile from mechanical disintegration of the cells. The resulting mass when injected into animals produces a serum which is powerfully anti-toxic and bacteriacidal.

The serum diagnosis of typhoid fever (Widal's reaction) is now so firmly established that it is performed as a method of routine diagnosis in most, if not all, of the public laboratories of the country. The method of Hiss (isolation and identification of the bacilli from the feces) while giving positive results somewhat earlier in the disease than the Widal reaction, is not generally used on account of certain practical difficulties connected with it. In a large majority of cases, cultures properly made from the blood will contain typhoid bacilli earlier in the disease than a diagnosis can be made by the serum method. This method is one that does not recommend itself to the

general practitioner or the diagnostic laboratory on account of the difficulty of collecting and transporting sterile blood. Wolf[15] has proposed a modification of the Widal reaction which may be useful. He makes a culture from the feces of the suspected case, incubates for twelve hours, and tests the mixed culture with a known typhoid serum. If clumping occurs, the typhoid bacillus is present in the feces. He claims by this method to have demonstrated the presence of the disease before the advent of pronounced symptoms. If this is really the case, it would seem that his method would be improved by adding caffiene to the broth to inhibit the growth of the colon bacillus.

Many of the sources of typhoid fever are still shrouded in mystery. In the majority of cases, aside from epidemics, the source of the infection cannot be found. Formerly it was believed water was the chief carrier of the disease. While water-borne typhoid is undoubtedly responsible for many epidemics, yet it is gradually becoming understood that there are many other sources of infection fully as important. The transmission of the disease by flies, and presumably by other insects, is now well established. Welch has recently said that the majority of cases are not attributable to water, but to direct transference from one patient to another, or by things with which the patient comes in contact. Milk is an excellent medium for the growth of the bacillus, and has been the cause of many epidemics.

In 1896 an organism was isolated from a case resembling typhoid fever, and described by two French bacteriologists, who called it the paratyphoid bacillus[16]. Recently numerous cases due to paratyphoid infection have been reported, and it seems probable that the disease is a distinct, or, possibly, two distinct infections. The organisms are intermediate in their cultural characters between B typhosus and B coli communis. Two distinct types, A and B, have been described by Schottenmüller[17] and carefully studied by Gwyn[18], Buxton[19], Durham[20], Cushing[21], Pratt[22] and others. Members of this group ferment dextrose with the formation of gas, thus resembling B coli communis; but do not produce indol or ferment lactose. Both paratyphoids produce an acid reaction in milk, the reaction in the case of A remaining acid while the terminal reaction of B is alkaline. Both species reduce neutral red with the production of fluorescence, but with A the red color finally returns. That these two organisms are distinct seems probable from their serum reactions. Sera that react in high dilutions with variety A will not agglutinate B except in

dilutions lower than one to ten, nor will either of the varieties agglutinate either coli or typhoid sera except in very low dilutions.

The surest way to diagnose a case is to make cultures from the blood in the same manner as is done for typhoid fever. The organism has occasionally been recovered from the feces and the urine. If the organism cannot be recovered from the blood, a diagnosis is justified if the blood from the patient clumps a paratyphoid culture in high dilution. Both varieties should be tested. Positive reactions at low dilutions cannot be accepted as evidence of paratyphoid infections. The mortality from these infections is usually very low, especially in those cases caused by variety A.

Much interest has been manifested in this country during the past year in the plague on account of its persistence in San Francisco, even after it was officially declared not to exist by the Governor and the State Board of Health of California. The action taken by these men, presumably for commercial purposes, was as astonishing as it was culpable, and they have been unsparingly condemned by sanitary authorities both in this country and abroad. Their obstructive action is probably largely responsible for the persistence of the plague in San Francisco for the last three years, and for its appearance in at least one other city in the United States and at Mazatlan, Mexico.

Calvert[23] has recently discussed the transmissibility of this disease, and concludes that direct transmission from man to man is not very frequent, that water seldom acts a carrier, nor does air, except in the pneumonic type. The bacillus is long lived, and is carried by animals, insects, raw materials, foodstuffs and the like. A relatively small number of the bacilli may cause the disease.

As with typhoid fever, there have been two specific methods of treatment proposed—the method of protective inoculation introduced by Haffkine and a curative serum first introduced by Yersin. Haffkine's fluid has been largely used in India and in China with marked success, and is said to have actually stamped out the disease in some localities. This is a good record; for on account of the susceptibility of most animals to the disease, it is very difficult to control when once well-established. Contradictory reports have been received about Yersin's serum. Calmette states that it is of great value; its use reduced the mortality in an epidemic which he studied from 33 to 13 per cent. Cairns[24] also concludes that it is of value, and states that the action is bacteriacidal as well as antitoxic.

This double action of the serum is best obtained by its early administration in large doses, both subcutaneously and intravenously. In mild cases subcutaneous inoculation suffices. Other observers who have had to deal with epidemics of a severer type are not so encouraging in their reports, some going so far as to maintain that the serum is without effect. The concensus of opinion seems to be that in mild cases it is of decided value, in severe cases not of much use.

In 1898 Shiga[25 26] studied an exceptionally severe epidemic of dysentery in Japan, and found that while amœbæ were never present he could recover from the stools of those suffering from the disease, and from the organs of those dead from it, a bacillus which agglutinated strongly with the blood of a dysentery patient. Two years later Kruse[27] recovered the same organism during an epidemic of dysentery in Germany. Almost simultaneous with Kruse, Flexner[28] and Strong[29] reported that these bacilli had been found in cases of dysentery in the Philippines. Quite recently Duval and Bassett[30] have found this bacillus in many cases of infantile diarrhœa. Martin and Lentz[31], after a careful comparative study of cultures from various sources, came to the conclusion that there were two distinct types, the one isolated by Shiga, Kruse, V. Drigalsky, Flexner in the United States, and Müller; the other found by Flexner and Strong in the Philippines. These differed in minor cultural peculiarities and in their agglutinative reactions.

The bacillus lies between B coli and B typhosus. It forms no gas, and produces acid in milk without coagulation with a subsequent return to alkalinity. The formation of indol is doubtful. Its motility is also doubtful, Shiga and Flexner claiming that it is motile, Kruse and Duval that it is not. Recent work has shown that the bacillus is viable in the soil even longer than the typhoid bacillus. It may be that this organism has a habitat not yet discovered in nature.

The preliminary report of Duval and Bassett shows that they isolated Shiga's bacillus from forty-two typical cases of summer diarrhoea in infants. The organism was isolated from scrapings of the intestinal mucosa and in one case from the mesenteric glands and liver. The bacillus was found in large numbers in the stools of acute cases, but could be found with difficulty in mild and chronic cases. The bacillus which they found were identical with those described by Shiga, Flexner and others. Agglutination reactions were obtained when the blood serum of the patients was tested on

the organisms recovered from them. Reactions were also obtained with the serum from the adults suffering with acute dysentery and with the serum of animals immunized against the bacillus. The bacillus was not found in 24 healthy children, nor in many cases of simple diarrhœa, marasmus and malnutrition. They believe this bacillus to be the cause of summer diarrhœas in infants and that these are identical with acute bacillary dysentery in adults.

An attempt is now being made by Flexner and his associates to test the efficacy of a curative serum prepared by him, and by autumn we will probably know whether or not it is of value in the treatment of this disease.

Only four of the more important diseases have been considered and these very incompletely. The recent studies on influenza, scarlet fever, variola, rheumatic fever and an attempt at immunization against malaria are all of great interest, but the time at my disposal will not permit me to discuss them. There has accumulated a great mass of data regarding disinfection and disinfectants, and our practice in this direction is slowly becoming scientific instead of empirical. Important discoveries have lately been made of the action of some of the soil bacteria, in the conservation of nitrogen in the soil. Studies of great value are being made on problems connected with water supply and sewage disposal, which promise to have important practical results, and in many other directions, bacteriology is reaching out towards the solution of problems of vastly greater importance than any that have hitherto been attacked.

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PROGRESS IN OPHTHALMOLOGY.

BY TALBOT R. CHAMBERS, M. D.

The death of the great Dr. Panas, of Paris, is recorded. During the past year there has been a marked increase in trachoma and follicular conjunctivitis in Hudson county, as elsewhere throughout the country. Our experience with argyrol leads us to corroborate the findings of Dr. A. Darier. In a paper read before the Paris Opthal. Soc., April 7, 1903, he said if protargol was good, why seek something better. But argentamine was better. Argyrol is better still. It is a long step forward in the treatment of diseases of the eye It is painless and yields better and quicker results than we have yet been able to obtain with any other silver salts. Adolph Alt, St. Louis, in the *Am. Jour. Ophthal.*, October 1902, states he has used the 5 per cent. solution with similar success. Dr. J. Pedersen of New York, and others have written of its superior advantages in catarrh elsewhere in the body.

Speaking of trachoma, the Medical Inspectors in Prussia, did not find a single school in which there was less than 5 per cent. of the scholars infected. In the villages the proportion averaged from 20 to 48 per cent. Raehlmann states that more than half a million persons suffer from trachoma in three provinces alone. The government

appropriates $87,500 every year to fight it, but still more energetic measures are demanded by the Berlin medical press. In Brooklyn over 2,000 pupils were excluded from the schools this year because of eye disease.

Dr. M. S. Mayon, *Lancet*, Feb. 28, 1903, discusses the use of X-rays in rodent ulcer of the cornea and trachoma. He says: "Here we have a method of setting up a leucocytosis with the absolute minimum of destruction to epithelial and other structures." After trial with fifteen cases, he claims: 1. There is considerable less deformity in the lid than after the old established means of cure by operation and caustics. 2. It is practically painless. 3. Pannus clears more thoroughly. His full article should be read by one before beginning the treatment. Others have written on the subject, but this author is selected for this report.

Kipp, *Am. J. of Oph.*, Vol. XIX, No. 12, reports a case of epithelioma of the ocular conjunctiva—excision—many relapses, but final cure, with remarks on the microscopical examination by Adolph Alt, of St. Louis.

Kipp, *Jour. A. M. A.*, August 9, 1902, shows the great value of the galvano-cautery in treatment of serpiginous ulcer of the cornea.

Dr. Wm. A. Fisher, Chicago, in the *Oph. Record*, January, 1903, in reporting 150 magnet operations says: "No delay should be tolerated when a foreign body has entered the eye-ball. If the object be iron or steel, the sideroscope may be used, but one should not wait for an X-ray picture to be developed. Sightless, quiet eyes that appear perfectly normal are preferable to glass eyes." He says that "he is willing to affirm that there is no metal in the suspected eye when he cannot find it with the giant magnet and have a negative X-ray picture."

Kipp, *Arch. Oph.*, Vol. XXXI, No. 4, calls attention to the removal of a large piece of iron from the eye-ball after failing with the magnet. He simply reversed the magnet and the foreign body revolved on its axis, and was instantaneously removed.

Dr. A. Ramsey, Glasgow, *Lancet*, January 31, 1903, enucleates the eye, but takes care to catch hold of the muscles with silk before severing them from the ball, and he passes a stitch through the conjunctiva to make a purse opening through which he inserts sufficient paraffine to suit the case and closes the wound. He inserts a shell in one week and has only four failures out of twenty-two cases.

Oatman, of Brooklyn, *Med. Record*, March 7, 1903, inserts a paraffine ball instead of glass in doing the Mule's operation.

Roemer, *Archiv. fur Oph.* LV., Ban. 2. Heft, in an exhaustive article, states sympathetic ophthalmia is due to an infection which for the eye is pathogenic, but which is indifferent so far as the rest of the body is concerned, and which reaches the other eye by metastasis, possibly by way of the circulation. H. Gifford, Omaha, *Archiv. Ophthal.*, November, 1902, has an able article on the history of the theory of sympathetic ophthalmia.

H. M. Starkey, Chicago, J. A. M. A., April 25, 1903, has an exhaustive paper of great interest and value. The discussion of the paper by eminent ophthalmologists on the subject—"The Use of Mydriatics After the Age of 45"—is found in connection with the article. His conclusions are: "No age can be arbitrarily fixed beyond which cyclopegics must not be used. They are required in fewer and fewer cases as life advances, but since there is more danger of glaucoma in the elderly, these drugs should be used with caution after the age of 40, and in certain cases not at all."

H. V. Wurdemann, *Annals Oph.*, April, 1903, reports a case of pulsating exophthalmos as cured by ligature of the common carotid. The external was first tied, but the bruit and exophthalmos persisted, so the operation was extended to occlude the common carotid. The exophthalmos, the noises in the head, the headaches and the general nervous disturbances disappeared, and nine months later the patient seemed to be permanently cured. He says that enucleation, which had been advised, in this case would have been a grave mistake, as the varix behind the ball would certainly have protruded in a mass between the lids, causing dangerous bleeding.

Dr. S. D. Risley, Philadelphia, *Annals of Gynecol. and Pediatry*, March, 1903, claimed that 88.81 per cent. of the children in the public schools manifested some congenital defect. In many instances, the child, with uncorrected error of refraction, for instance, was unfitted to bear the strain of the struggle with books. A card of test letters was published, with instructions as to its use printed on the back, and distributed to the schools. The plan required the teacher of each class to determine the sharpness of vision of each eye of every member of the class at the beginning of the school year, and to record the findings on a blank furnished for the purpose. If the acuity of vision fell below a prescribed standard, a card was provided

to be sent to the parents of the child, on which the fact of the defective eyes was briefly stated and professional advice advised. Without exception, every child presenting one of these cards at Willis Hospital clinic was in need of professional advice.

GYNECOLOGY; ITS HISTORY AND DEVELOPMENT.

BY JOSEPH M. RECTOR, M. D., JERSEY CITY, N. J.

In asking your attention to a brief review of the history of gynecology, I fear that the repetition of well-known facts may prove uninteresting and that I may be presuming upon your good will in taking so much of your valuable time to consider the manner in which this branch of medical learning had its beginning and through what difficulties it passed before being recognized as an individual branch of medicine and surgery.

To appreciate what has been accomplished in gynecology, one must be in possession of the knowledge of what has been done in the past, what methods were adopted, what struggles were overcome, what difficulties were encountered and with what fortitude the early physician and surgeon battled as against long established customs, ignorance and superstition, in laying the foundation for future success,

The Egyptologists inform us that a knowledge of medicine existed three thousand years before Christ. Pliny tells us of a school of medicine at Alexandria during the reign of the Ptolemies. Among the hieroglyphics the shape of the uterus can be recognized. Six of the forty-two volumes attributed to Hermes refer to medicine, and the sixth treats of the diseases of women. The Hippocratic collection includes among its monographs one upon the diseases of women. In the books of Moses reference is made to the hymen and menstruation. St. Luke says, "a woman having an issue of blood twelve years, which had spent all her living upon physicians, neither could be healed."

The real history of gynecology begins with the writings of the Greek school. There we find mention of displacements, metritis, and disorders of menstruation. Celsus, Galen and Aretæus describe leucorrhea, ulceration of the uterus, the discharging of products through the vagina and rectum, and mention of the vaginal speculum

as distinct from the rectal speculum. Soranus the younger, about 220 B. C., wrote a treatise entitled, "De Utero et Pudendo Muliebri," describing the sexual organs, the changes in the os uteri during pregnancy, the difference between pregnancy, ascites and solid tumors. He understood digital examination and the use of the sound and speculum.

From this time until the time of Ætius the records are uncertain, and I am unable to relate what progress, if any, was made. Ætius, five hundred years after Christ, in his works, on record in the library at Alexandria, in the sixteenth book, speaks of periuterine cellulitis, vaginal injections, caustics in the treatment of ulcers of the cervix and the use of the sound for replacing the uterus; the use of the speculum, sponge tents, pessaries, and the importance of hip baths; the use of galls, rose oil, barley, alum and linseed.

In the year 640 A. D. the library of Alexandria was destroyed by the Saracens, the laws of Mohammed forbade the examination of women by men, and as a result we find an absence of investigation and learning until the end of the eleventh century, when Albucasis wrote and taught upon this subject. This period is known to history as the "dark ages." It extended from this time until the sixteenth and seventeenth centuries. There are no authentic records indicating any material advancement, but in its stead we find chaos, ignorance, superstition and unnatural conditions prevailing. The learning of the Greek School was forgotten, the Arabian School, which in the beginning attempted to fashion itself after the teaching of the Alexandrian physicians, soon became disorganized and fell to decay.

The practice of obstetrics during these centuries was left to midwives, and these, for the most part, were ignorant and filthy old women, slaves of routine procedures that had obtained from time immemorial, and there was nothing accomplished. In the beginning of the sixteenth century, prejudice gradually gave way to progress and the enlightened physician once more began his onward march of education and advancement. At this time the separation of the priesthood from medicine was completed, schools of medicine were improved; hospitals, dispensaries and societies were organized. The different governments enacted laws for the protection of the public from imposition and quacks, witches, mountebanks, vagrants, barber surgeons and magicians disappeared.

Educated obstetricians then appeared. Their teachings embraced

not only obstetrics, but gynecology as well. What could be a more natural or systematic classification at this time, than the placing in one catagory, the allied subjects of obstetrics and gynecology. As it requires the normal healthy vulva, vagina, cervix, uterus, fallopian tubes and ovaries to give to women the special functions of her sex in natural menstruation, copulation, conception and successful pregnancy, so it is the same organs, but in their changed and diseased conditions, that render possible the science of gynecology with the assistance it extends to suffering womankind.

Ambrose Pare was the first man of prominence at this time. His work was mainly that of a surgeon, but in his pupil. Jacob Guillemeau, who flourished in 1550-1603, we find his ideas on obstetrics and gynecology well advanced. The use of the vaginal speculum is once more described, methods were adopted to hasten the delivery of pregnant women because of hemorrhage or puerperal convulsions. The Cæsarian operation, first described by the Greeks and Romans, which had fallen into disuse during the middle ages, was once more revived. Rousset reported successful cases, and among others, that of a woman upon whom this operation had been performed six times. Louis Bourgois, in 1626, published a treatise upon abortion, sterility, fecundity, accouchement and diseases of women and children. Mauriceau, of Paris, wrote a monograph upon disease of women, pregnancy and childbirth. The Chamberlains in England, fashioned an instrument to aid in the delivery of the arrested fœtal head. Portal was the first to propose version by one foot. In Germany, Justine Siegemundin, the court midwife, advocated puncture of the membranes for artificial delivery, and bi-manual version to be used in abnormal presentations. Degraaf, about 1650, described the ovarian follicles, which to this day bear his name. Stenau mentions the uterus as a muscular organ, and Hoboken, of Utrecht, very accurately described the placenta and the coverings of the ovum. In 1721, Palfyn, a surgeon of Ghent, while attempting to outdo the Chamberlains succeeded in making two steel spoons which was a more useful and better instrument, whereby he received honor as being the inventor of the forceps. William Smellie about 1740 modified the instrument of Palfyn; called attention to the importance of a knowledge of deformed pelvis; distinguished one diameter from the other, and pointed out the usefulness of cephalic version and version of the breech. William Hunter, his cotemporary, agreed with

Smellie, excepting that he could find no use for artificial aids or instruments at delivery. In 1761, Astruc described the occlusion of the vagina, obstruction to the menstrual flow and gave directions for a vaginal examination.

This, gentlemen, brings the study of our subject to the great nineteenth century. You, who have spent the greater part of your lives in its closing years, and we who are just beginning to realize its magnitude, can look back and with wonder and amazement behold the rapid strides that have been made in every department of art and science. The wheels of time have rolled by, and with each revolution we have seen the years of marvelous progress, the wonderful discoveries that were made, the constant spirit of unrestfulness, the ever seeking desire for truth and the ever eager mind of man grasping for some gleam of light which would clear the darkness from some hidden mystery. One by one, beliefs which have stood from time immemorial were swept away, scientific creeds were proven to have been false, logical deductions were shown to have been the results of false premises, while cherished traditions which had held their place until this time were soon forgotten, and in their stead we find the truth of modern thought. In short, it is but the proof that while the mind of man was always great, the mind of the nineteenth century is the greatest of them all.

In the midst of all this educational advancement and progress we find the study of medicine and surgery had not been forgotten. In the first half of the century there was no distinct division of one branch or another, yet there was a constantly growing tendency among the able men to give their attention more to one subject than to another, probing deeply into the problems that confronted them and attempting to advance the special subject of their interest beyond that of the others.

In 1801, Recamier, a man not so much of originality as practicability, made himself known by advancing to the first place the use, as scientific instruments, of the vaginal speculum and uterine sound. It is not to be supposed that he was the inventor of these instruments, nor are there any particular modifications bearing his name. Their constant use and practice had enabled him to recognize their value and by their means to demonstrate to his confreres the benefit of a visual examination of the vagina and cervix, the exploration of the uterine cavity, and by use of a small scoop or curette he scraped its mucus membrane.

Following upon his advice Melier, in 1832, suggested local treatments and injections into the cervical canal; Guilbert, in 1826, applied leeches to the cervix; Huguier, Kiwish and Simpson, in 1828, advocated their use and did their utmost to interest their fellow gynecologists in their value as an aid in diagnosis and treatment. Dr. Bennet, of London, in 1845, edited a work upon "Inflammation of the Uterus." He claimed that the main cause of uterine diseases was inflammation, which resulted in ulcerations, displacements and pathological conditions of the appendages; leucorrhœa and abnormal menstruation were largely symptoms of this diseased state; inflammatory action remained mostly within the cervical canal, and the application of strong caustics was the proper treatment for the disease. It is safe to say that no work appeared at this time which did so much to advance the knowledge of uterine pathology. As the result of these assertions, the gynecologists at once arrayed themselves against him. question after question was reviewed, theories and reasons were assailed, and Dr. Bennet found his views attacked by such able men as Drs. Lee, West, Tilt and Tyler Smith. Dr. Tilt, in 1850, published a book upon the subject of "Ovarian Inflammation," in which the following deductions were made: 1st. Greater practical importance should be recognized in the inflammations of the ovaries; 2d, rarely is the entire ovary diseased; 3d, pelvic diseases of women begin with morbid ovulation; 4th, ovaritis is most frequently due to morbid ovulation; 5th, ovaritis often causes pelvic peritonitis; 6th, the ovary and the oviducts are the frequent cause of free blood in the peritoneal cavity; 7th, ovaritis is the forerunner of disturbed menstruation; 8th, ovarian tumors are caused by abnormal graafian cells.

In 1854, the subject of uterine displacements and their importance in relation to uterine disease received attention. Velpeau, in France, is quoted as saying, "I declare, nevertheless, that the majority of the women treated for other affections of the uterus have only displacements, and I affirm that eighteen times out of twenty, patients suffering from disease of the womb or of some other part of this region, those, for instance, in whom they diagnose engorgements, are affected by displacements." Graily Hewitt, in his publication, "Diseases of Women," speaks as follows: "1st. Symptoms of uterine inflammations are often found associated with flexion or alteration in the shape of the uterus. 2d. Chronic inflammation causes changes in the shape of the uterus. 3d. Flexion of the uterus acts constantly as the cause of chronic inflammation." With this stimulus at hand, all physicians

and gynecologists examined every complaining woman for flexions or versions of the uterus, and each in turn invented some instrument or pessary for its relief, or else modified the pattern of someone else.

Sir John Williams wrote an excellent monograph, "On the Circulation in the Uterus," pointing out the course and direction of the blood supply, deducing therefrom the cause of passive congestion as occuring in the versions and flexions of the uterus and also in the procidentia. Polk and Barbour described the fact that in the pregnant uterus at term the relations of the pelvic peritoneum behind and in front were the same as in the non-pregnant uterus, while at the sides the pelvic peritoneum is lifted high and on a level with the pelvic brim. Dr. Stephenson proved the peculiar property of the uterine peritoneum in yielding to a gradual growth for an unlimited extent while rupturing under a sudden force.

The next marked advance in gynecology was the fixed recognition of successful ovariotomy, and to Dr. Ephraim McDowell is the honor due. The story says that in 1809 a poor woman travelled sixty miles upon horseback to have an ovarian cyst removed. A nine-inch incision was made to the left of the median line, the cyst punctured, a suture applied about the broad ligament near the uterus and the sac removed. The operation was finished in twenty-five minutes. Repeating the report of Dr. McDowell, "In five days I visited her, and, much to my astonishment, found her engaged in making up her bed. I gave her particular caution for the future, and in twenty-five days she returned home in good health, which she continues to enjoy." So may we rightfully accord to this good man the first place in abdominal surgery. I do not mean to convey the idea that removal of the ovary for disease originated with Dr. McDowell. The records show that Dr. Clay, of Manchester, in 1842, published a series of cases for which ovariotomy had been tried. Dr. John Bell, of Edinburgh, lectured upon the possibility of relief in such treatment, nevertheless, the fact remains that the operation was not endorsed and the confidence of the profession was not established until the successful operations were performed by Dr. McDowell. With the advancing knowledge gained by these abdominal sections, the questions arose as to the best method of treatment for the stump, whether extra or intra-peritoneal. In 1850 Mr. Duffin insisted that the stump should be treated extra-peritoneal and the clamp used, Baker Brown employed the cautery with the stump extra-peritoneal, Tyler Smith returned the ligated pedicle.

Spencer Wells, in 1864, published a work upon "Abdominal Tumors." He mentions the fact that researches and investigations were now begun as to the relative merits of the clamp, ligature and and cautery. He applauded the method of Mr. Duffin, and speaks of experiments to ascertain the ultimate condition of ligated stumps left within the abdominal cavity, and praises Koeberle for his study of the effects and results in abdominal drainage. Among other subjects he mentions the results of experimentation upon animals, conducted for the purpose of determining the process of healing when the cut peritoneal edges were or were not held into opposition by suture. In the former instance, the inner lining of the abdominal wall is again made perfect, intestines or omentum do not adhere and post-operative hernia is rare; in the latter, retraction of the cut edges occurs, direct union is wanting, omentum or intestines adhere to abdominal wall and post-operative hernia is frequent. The after-treatment of abdominal cases is discussed with special reference to the use of opium, feeding, stimulation and sequella.

Thornton, in 1890, reviewing the results of abdominal surgery up to the year 1876, writes as follows: "We first have the general want of cleanliness and the lack of all appreciation of knowledge of what constituted surgical cleanliness, then the long ligature and the clamp, both clumsy and unscientific and both specially suited to make the want of cleanliness more deadly; and then following with an appreciable but far different influence, we have delay in operating, tapping and the long incision. Then I must not forget drainage, for I think it is highly probable that a good system of drainage, such as we now have, thanks to Koeberle and Keith; would have done much to counteract the evils I have named above, though the frequent use of the drainage tube, with the long ligature and the clamp, would have introduced new elements of risk which I shall have to refer to again when I speak of the place which drainage occupies in the successes of to-day."

With the impetus thus far given to abdominal surgery it is not surprising to find the next step was the removal of the fallopian tubes and ovaries for other pathological conditions. In 1872, Lawson Tait, Battey and Hegar became known to us because of their labors in this direction. To Tait belongs the credit of removing the appendages for pathological lesions, to Battey the removal of the normal ovary to relieve various neuroses which he believed were caused or aggravated

by the changed or altered function of the ovary, and to Hegar the removal of the ovaries for the cure of uterine fibromata.

Following closely upon the operations for ovariotomy and salpingotomy came the further development and enlargement of abdominal surgery in the removal of the uterus for uterine fibromata. At first the mortality was high—in 1883, Tait, Martin and Schroeder had a thirty per cent. record of death. Keith was more successful because of the larger experience gained from the labors of those before him. He succeeded in lowering the mortality to an even basis with ovariotomy. Dr. Apostoli now appeared as the champion promoter of electricity in the treatment of uterine fibromata. His contention was the reduction of the size and in many instances their entire disappearance. A large clay pad was used upon the abdomen which held in place the positive pole, an insulated sound was passed into the uterine cavity and a current of from 50 to 100 milliamperes was allowed to pass.

In 1883, Dr. Tait first called attention to the frequent occurrence of ectopic gestation and in the same year succeeded in performing his successful operations. The cause at first explained, in the abdominal form, was due to the fertilized ovum having fallen into the peritoneal cavity in its journey to the fimbriated extremity of the tube. Pelvic hematoceles and hematomas were now recognized as the result of the rupture of the fallopian tubes, hemorrhagic peritonitis or rupture of the veins in the broad ligiment. In 1892, Mr. Bland Sutton described the existence of the tubal mole.

Malignant disease of the uterus during this time was receiving its equitable share of attention. Church, in 1864, makes mention of the affection, Denman writes of the misfortune in not having a classification of the existing varieties, Tilt, at times, mistook it for uterine fibromata, Dr. John Clark caused the name of "corroding ulcer," to be applied to it. Waldeyer and Thiersch were among the early operators who described the disease as beginning in the glands of the parenchyma. Sir Charles Clark believed the usual origin to be in the cervix, because of its glandular composition. Rugie and Veit conducted a series of investigations to determine the difference between glandular erosions of the cervix and the early signs of true cancer.

Until the year 1857 it was the custom of the gynecologist to attribute the cause of phlegmon, pelvic exudations, pelvic abscess, para-

metritis and the like to inflammation. The inflammations were thought to occur in the connective or cellular tissue of the true pelvis. The first marked attention was given between the years 1840 and 1844, when Churchill, Doherty, Calvi and Bourdon contributed largely to the literature on these subjects. Bernutz, in 1857, at a post-mortem examination of a woman supposed to have died of peri-uterine phlegmon, discovered the true cause. The leison did not effect the cellular tissue, but consisted of an abscess whose walls were formed by the adhesions between rectum, bowel, bladder and uterus. As a result of similar cases and post-mortem findings, he concluded that: 1. Pelvic peritonitis was a frequent disease; 2. The mass found to exist after death from pelvic peritonitis was due to adhesions of the various pelvic organs as being the result of this disease; 3. Inflammation of the pelvic cellular tissue was symptomatic only, such symptoms being due to inflammatory disease of the fallopian tubes or ovaries.

Dr. Thomas, in 1880, gave expression to the following: "1. Peri-uterine cellulitis was rare in the non-parous woman, while pelvic peritonitis is exceedingly common. 2. A very large proportion of the cases now regarded as instances of cellulitis were really cases of pelvic peritonitis. 3. The two affections are entirely distinct from each other and should not be confounded simply because they often complicate each other. 4. They may usually be differentiated from each other and a neglect of the effort at such a thorough diagnosis is as reprehensible as a similar want of care in determining between pericarditis and endocarditis."

Hart and Barbour, in 1886, placed inflammatory diseases of the pelvis, either peritonitis or cellulitis, under the one head, their symptoms being correlative and their lesions similar in nature and extent. Doran, in 1893, records the history of tubercular disease, beginning in the tubes and ovaries and spreading to and involving the peritoneum, causing a tubercular disease of this membrane.

No greater stimulus was ever given abdominal surgery than the discoveries of Lord Lister. The gynecologist hailed with delight the dawn of antiseptic surgery, its principles were readily mastered and the practice was quickly formed. At once the high death rate was lowered, the anxious fear of the surgeon was dispelled, post-operative inflammation, *per se*, quickly became a relic of the past, while the everlasting gratitude of suffering womankind raised its voice and sang

aloud the immortal names of Lister, Koch, Tyndall and Pasteur. From antiseptic surgery as a parent, the child, aseptic surgery, was soon born. Time has developed its life until to-day, we stand upon the pinnacle of fame whose foundation was fashioned by the mighty hand of Lister.

About the middle of the nineteenth century there appears in our country, a name most dear to us all, Marion Sims, the father of modern surgical gynecology and the pioneer of plastic vaginal surgery. Can you picture in your mind a more glorious triumph to him than when he beheld the poor negro woman tramping through the dusty southern roads, miles and miles, to worship at his shrine? And again, imagine their joy at being relieved of that most dreadful malady, the vesico-vaginal fistula. It is for this victory that the medical world gives to him the honor he has so rightfully gained. Without earnest thought, gentlemen, you can hardly appreciate the wonderful gain thus made or the triumph achieved. Think for a minute the condition of the poor, helpless woman, a suppliant before your eyes, her foul smelling clothes and her mental anguish, an outcast from society and a sufferer until this time for the rest of her mortal life. It reminds me of the biblical cry of the leper, "I am unclean."

It was in 1852 that Sims perfected his technique of healing the torn bladder floor. His main points of originality were: 1st, the perfected speculum; 2d, the suture which would not irritate the tissue; 3d, the complete drainage of the bladder during the healing of the fistula. Thomas Emmet should receive mention here partly as a contemporary and partly because of his conciseness, practical thought, intelligence, and that certain aptitude of application which is born of and associated with skill and genius.

With the teaching of Sims we may well mark the beginning of modern gynecology. The fashioning of his speculum, his methods of pelvic and vaginal examination, his original ideas, operations, management of cases and routine methods of treatment startled the medical and surgical world and awakened an interest which has since followed in this special line of thought, giving possibilities which before were scarcely dreamed of. Medical colleges recognized the advancement, practitioners of medicine saw and felt their deficiencies, while post-graduate students at once deemed it necessary to perfect themselves in this new specialty before they could believe themselves proficient and well qualified to act as family physicians in the honest care of wives, mothers and daughters.

As the old adage tells us, "History repeats itself;" so it is true with gynecology, that from its inception as a modern study until the present day, gynecology has passed through all the varying dogmas and doctrines to which this or that discovery has given rise. At first every woman who had borne children was thought to possess an inflamed, engorged or ulcerated cervix, and for her well-being local applications were a necessity. All headaches, backaches, disturbances of vision and general neuroses were thought to be the result of uterine displacement, and the age of the pessary was at its height. Oophorectomy was the cure-all for hemorrhagic fibroids, hysterical neuroses and obscure pelvic pain, until, after such castrations, a train of nervous phenomena supervened which often ended in delirium, loss of mental power and, finally, insanity. Cellulitis at one time was the name given to all exudations, inflammations and deposits around and about the uterus and in the broad ligament, hot water douches and topical applications were in vogue with the oft-repeated visits to the doctor's office and the oft-repeated tale of woe, "Doctor, I am no better."

It needed but the test of experience and practice to point the error of our ways. Success is not always the immediate reward of a speculative beginning; it is the result of progress and exact truth gained from repeated mistakes and trials. Knowledge and learning are the rich returns of investigation and experimentation. Surgical research and the untiring work of mighty minds have taught us to revolutionize our ideas of early gynecology. Hypertrophy, erosions of the cervix and ulcerations of the everted mucous membrane are the results of lacerations which trachelorrophy or amputations of the cervix will cure. The dynamics of the uterus teach us the etiology of the mechanical versions and flexions. A more intimate knowledge of inflamed and adherent tubes and ovaries compel us to forget that cellulitis as an individual disease was ever thought to exist. How many good women have lost their lives or have been condemned to invalidism because of the belief furnished by the older physicians that uterine hemorrhage or foul discharge after the climacteric were but its inherent cause or peculiarity, which we now know to be the result of fibromata, carcinomatous or sarcomatous growths, the early recognition and thorough extirpation of which will prolong the life if not entirely cure the unfortunate woman.

The performance of abdominal section by men skilled in this work resulted at once in a great lowering of the mortality, and rightfully

should it be, engaged as such men are in selective surgery alone, unhampered by the constant septic cases of the general surgeon. The earliest records of low mortality were the work of Thornton, Sinclair, Keith, Tait and Bantock in England, and in this country by Thomas, Dunlop, Atlee, Peasley, Kelly and many other equally brilliant men. The perfect removal of ovarian cysts, the amputation of infected fallopian tubes, the position of Trendelenburg which gives to the surgeon a clear field, an unobstructed view, are all the results of laborers in this special branch of surgery.

The early opprobrium of the laparotomist, the fistula which often followed his work, is now relegated to the past, as the gynecologist has adopted the use of catgut in the place of the non-absorbable silk suture. How often has the surgeon feared the result when he was compelled to tie his uterine, tubal or ovarian stump with a large cable of silk, and this mode of procedure was popular in the early days of my surgical work.

The frequent starting point of carcinoma was found to be in the much abused cervix, and the gynecologist at once rid the body of this danger. Early plastic work upon the perineum was sufficient if it made the vulva appear healed; the cosmetic effect was good, but the pelvic fascia and the torn perineal muscles were as widely apart as after the time of rupture. It is a sad spectacle to me to-day to see the older physician and surgeon attempt to unite the torn muscles, fascia and skin with one broad, sweeping or bunching vulval suture, evidently forgetting his anatomy or the action of the torn tissues which he in vain seeks to unite. Plastic vaginal surgery offers the correct method of dealing with this class of injuries, and when the physician or surgeon is unable to pursue the proper technique, it is far more laudable to call his able brother's assistance than for him to fail or to have such a stigma placed upon him.

The queston of proper support for the relief of uterine versions and flexions, while not as yet satisfactorily settled, is fast nearing perfection in the hands of Alexander, Kelly, Dudley, Goff and Mann. Inflammatory conditions and new growths of the bladder are fast yielding to the skillful work of Pawlick, Emmet, Skene and Kelly. Complete procidentia of the uterus, at first treated with tampons and pessaries, are now relieved by combined plastic and abdominal work. Pathological lesions and accidental division of the ureters are no longer a reason for the death warrant of our patient, as Kelly, among

others, has given us a plan of treatment for these unfortunate conditions. Posterior vaginal section is the work of the gynecologist; by its means the vaginal route to the pelvis and abdomen supersedes the abdominal in many and appropriate cases; its advantages are too well known to you all as a recent procedure to bear from me a repetition here.

So, gentlemen, might I continue to chant the praises and the blessings which honestly belong to the labors of the gynecologist. Time, study and persistency have caused him to advance and so will he continue to advance until the diseases peculiar to women no longer exist. In the records of history and fame you will find the names of Kelly, Baldy, Boldt, Cragin, Davis, Skeene, Grandin, Mann, Price, Bovee, Pryor, Thomas, Munde, Barbour, Hart, Thornton, Playfair and hosts of other brilliant men who have spent the greater part of their active lives in the labors of this useful field.

It is strange that the general surgeon should wish to deprive the gynecologist of his rightful place, to usurp as his own the great work that has been done, to belittle the value of further special work now that almost perfection has been reached, and the gynecologist has taught the surgeon all that is known concerning pelvic and vaginal surgery. There is no need for jealousy or envy upon the part of either one; there is abundance of work for all and great need for skilled men in either branch.

If the dissatisfied or ambitious surgeon will stop to reflect for one moment, he will readily see that one man's mind is not thoroughly capable of mastering the great knowledge or technical skill required for perfection and proficiency in every branch of surgery. The domain of surgery in the twentieth century is one of constant progress, and is far too large for the feeble faculties of one possible master mind. The laity will acknowledge our worth and value by the amount of learning we possess and the cunningness of art and skill we display, giving no thought of recognition to the multitude of subjects we unsuccessfully attempt to crowd within the narrow confines of one mortal mind.

The surgeon does not believe the great field of general surgery is perfect and complete; that further progress is no longer possible; that he need not confine himself exclusively to his chosen branch; the physician does not boast of perfection and the attainment of the highest goal; the accoucheur knows there is room for improvement

in the treatment of the pregnant woman and her unborn child; the pathologist is constantly struggling with the problems of his department and day by day shedding light upon some hidden truth, and so, gentlemen, does the gynecologist feel proud of the laurels he has won, the advancement he has made, the lives he has saved, the sorrow and sickness he has relieved, the place of honor he has gained and the recognition he has received before the eyes of the medical world.

If you or I were compelled to have the benefit of competent advice, we at once seek our professional brother who is best skilled in that special branch under which our case may fall. It is, indeed, the admonition of the anxious parent, relative or friend that such should be the choice. There is a sacred duty placed upon us, a trust that knows no bounds and a life that must be saved. We fail in the honorable discharge of that duty unless the patient is given the benefit of the most skillful mind that can be found.

A man is masterful in a chosen subject only as he is cognizant of every particular, proficient in every branch, possessed of every aid which might assist him in the perfect performance of his work, acquainted with the entire range of special thought which will enable him to decide the proper course to pursue, and above all, endowed with that innate knowledge which is peculiar to birth and which has been gained by years of study and followed with ceaseless activity until it has secured for him a broad foundation of learning which alone fits him to occupy a place in the front rank of his chosen profession.

Untiring labor is the price of perfect success. Constant activity and continued application with intelligent discretion are among the necessary requirements of the successful surgeon.

The greatest surgeon is not he alone whose records can show the longest score of operations done, but he who, with the experience gained from investigation and operative work is enabled to deal intelligently and successfully with disease and honestly and impartially with his fellow-men. Thus alone he becomes a master of his art.

As such will we be judged and accordingly will our recompense be.

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DISCUSSION.

DR. W. F. FAISON, of Jersey City.—There is very little left for me to say. The general surgeon maintains that there is no place left now for the gynecologist, but I dissent from this opinion, although no one should attempt gynecology until he has spent years in general practice. I grant that the surgeon can do a laparotomy and remove the tubes and ovaries after he has been told by a gynecologist that such an operation is necessary. This is the point I wish to insist upon. I have seen the general surgeon repair a laceration of the cervic beautifully, but he left a large quantity of scar tissue behind. Similarly, he may close up a perineum externally, but not give the needed perineal support.

REPORT OF A CASE OF AMŒBA COLI DYSENTERY.

BY PHILIP MARVEL, M. D., ATLANTIC CITY.

History—In 1859, at Prague, Lambdl drew attention to the presence of amœba in the intestines, the case under observation being that of a child suffering from dysentery.

In 1870, Lewis and Cunningham, observed numerous amœba in the stools of cholera patients in Calcutta. But it was not until 1875 that the parasite, as an etiological factor of dysentery was determined by Losch. He succeeded in exciting in a dog, by rectal injections of fecal matter, containing amœba, ulcerous lesions of the large intestine, and verified the presence of the amœba in the dejecta of the dog, eight days after the last injection.

Kertulis, from 1881 to 1895, while practising in Alexandria, had an opportunity to study hundreds of patients; he observed and verified by the post-mortems, the presence of the parasite in more that five hundred cases, not only in the feces of dysentery, but in the pus of abscesses of the liver; on the surface of the ulcer and in the walls of the abscesses. He failed to find the amœba in other affections of the

intestine, whether ulcerous or not, and succeeded in cultivating the parasite in an infusion of sterilized dry straw, and twice provoked the disease in cats by inoculation of these cultures. Since then, these observations have been verified by other men, who produced the disease in dogs and cats, by injecting into the rectum fecal matter containing amœba.

Bacteriology—The dimension of the amœba vary ordinarily between fifteen and thirty-five micromillimeters; the body composed of two parts, is divided into an outer portion, composed of a clear, homogeneous substance, and an inner, highly refractive, containing vacuoles of greater or less size. When in motion the amoeba is characteristic. The movements, sometimes slow, and at other times rapid, consists of a progressive motion, but more strictly speaking in the thrusting out and retraction of the pseudopodia.

Growth—The amœba live in damp grounds or in water charged with organic matter, and their activity is greatly dependent upon the physical conditions of the media in which they live. When dry, they become inactive, and await more favorable conditions, which are brought about by a liberal amount of moisture; hence humidity and the absence of sunshine most favor their development, and, therefore, it is easy to infer that they may enter the human organism, or that of the lower animals, either by food or drink. They feed and multiply by division.

Metastasis—Some authors affirm that for the amoeba to reach the liver, they must have penetrated through the walls of the intestines, passed along the peritoneum and subsequently burrowed through the peritoneum and Windslow's capsul. However, it seems much more likely, that they reach the organ through the portal circulation, and in support of this opinion, is the fact that they are frequently met, not only in the walls, but also in the interior of the blood vessels.

Pathological Anatomy—The lesions produced by the amœba coli are usually, but not always, found in the large bowel, where the ulcers are not the superficial flat ulcers of ordinary dysentery, nor is the diffuse inflammation present. The intestinal ulcers of amœba dysentery are characteristic, and are described by Councilman and Lefleur, as usually causing a nodular projection containing small cavities filled with gelatenoid pus. These cavities open upon the mucous membrane by means of a small orifice or sinus tract through which pus may be squeezed, which pus always contains the amœba

in varying quantities. These ulcers are usually in the transverse or descending colon, but the lesion, however, may exist as an ordinary sloughing ulcer, or one with undermined or smooth edges and base. The microscopic changes found from scrapings at the edges of the ulcer, consist in dilitation of the capillary blood vessels, degeneration of the glandular cells, together with an infilteration of leucocytes. No fibrinous exudate is found on the surface in these ulcers. The submucous coat around the ulcer is also generally infiltrated with newly formed connective tissue cells, and the central purulent cavity containing pus cells, granular debris, bacteria, small round lymphoid cells, and large connective tissue cells. In the most usual form of ulcer, the characteristic change will be the folding over or the folding in of the mucous membrane, almost covering the ulcer and allowing only a small opening on the surface. Numerous nodular figures are also present, showing active proliferation of the epithelial cells. Therefore, it will be seen that the most intense change takes place in the membranous coat. The amœba are most numerous in the contents of the abscesses and stools, but are also found in the tissues of the mucous membrane, the muscular coat of the lymphatics, and thrombosed blood vessels. Councilman and Lefleur believe that the primary action of the amœba is the formation of granulating tissue, and that when real pus forms, it is due to a secondary infection. With this brief reference as a preliminary, I have the following case of amœba coli dysentery to report:

CASE NO. 1.—In July, 1902, I was called to see Mrs. C., a resident of the north-western part of our city, whose history is, briefly, as follows:

Born at Mays Landing, New Jersey. Age 35. Married eighteen years, has four children, no miscarriages. Reports previously normal menstrual flow, beginning during the twelfth year; now slightly irregular, and lasts about seven days. Some pain preceding the flow, gradually abating as the same advances. No leucorrhœa.

Previous General History.—She has had the usual diseases of childhood without sequella; had pneumonia about thirteen years, and la grippe seven years ago. Circulatory and respiratory organs apparently normal. The digestive functions have been and are now at times slightly impaired. Was curetted in August, 1902, to which reference will be made later.

Family History.—Grandparents died in advanced years. Grand-

father on maternal side died of cancer. Father dead, cause unknown. Mother, three brothers and two sisters living and well. When the patient was first seen her condition was substantially as follows:

Deep pelvic pain in the left inguinal region, radiating in the direction of the descending colon, aggravated at intervals by paroxysms that were exhausting and almost unbearable, except when relieved by anodyne. Temperature 101. Pulse 90. Respiration 24. No noticeable distension of the abdomen. No diarrhœa nor special manifestation beyond the presence and localization of pain, pointing to the nature of the disturbance. On the day following there occurred a uterine hemorrhage of moderate severity, which was readily controlled by vaginal packing. The following day after the removal of the tampon, examination revealed a mass which appeared to be in the left broad ligament, or adjacent thereto, about the size of a small egg. This mass was tender, painful on pressure, and gave to the touch the suggestion of fluid. A slight uterine flow or bloody discharge continued for some time thereafter, though not sufficiently free to require further tamponing. On the fifth day of the disease, the nurse called my attention to a vaginal discharge, largely of pus, and also, to the fact that there had simultaneously occurred a disturbing diarrhœa, with tormina and tenesmus, accompanied by acute pain in the rectum. The stools were semi-liquid and liquid, frequent, and shortly became dysenteric. Owing to this complication, no vaginal or uterine examination was made at this time to determine the source of the pus. As to the condition involving the rectum, it was first regarded as an acute proctitis, possibly the result of local infection. Its behavior, however, soon forced me to regard it as an attack of acute dysentery, and the treatment was instituted accordingly. The treatment, as is ordinarily employed in such cases, was continued for some weeks, with special care to the diet, sanitation, etc., but the results were in no wise satisfactory, nor relieving to the patient. The case grew, in some respects at least, at times more aggravated; however, there came a time when a favorable change took place, but not until after the patient had undergone a uterine curettment.

During the period intervening from the date of the hemorrhage to which reference has already been made, until the present date, *viz.*, August 17th, 1902, there continued a colored uterine discharge. This, in addition to the dysenterical discharges, was both distressing and debilitating to the patient, hence one reason for the operation.

It was noticeable at that time also that the mass attached to the broad ligament had largely disappeared, probably safely discharged itself through the uterine canal, as pyosalphinx are known at times to do. Simultaneously with the currettage it was also noticed that the dysenteric discharges suddenly ceased and the abnormal and persistent activity of the bowels during the preceding week had become as fixedly constipated as they had hitherto been diarrhœal or dysenteric. Just what relation the currettage—that is to say, the influence upon the nervous system—the anæsthesia and shock of the operation, together with the patient's apprehension, bore to this condition, to say the least, is exceedingly interesting and is a subject worthy of further thought and investigation, but the time allotted to this report will not permit of further reference upon this point.

At or about this time I made a proctoscopical examination of the rectum with electric illumination, which revealed an ulcerated area on the anterior part of the rectum, about two to two and one-quarter inches within the external sphincter. The ulcer, as near as could be made out, was about three-quarters by one and a quarter inches in diameter. The surface appeared œdematous, and somewhat angry looking, with slight elevations which were partly covered with mucus and mucoid debris, whilst others were clean and very finely granular. The ulcerated area was so sharply defined from that of the adjacent mucous membrane as to suggest a secondary manifestation of specific disease, however, considering the special history of the disease which had preceded this examination, as well as the negative one obtained when the general examination was made, I continued the treatment for the previously supposed trouble, namely, that of acute dysentery. After the aid of stimulating laxatives, such as oil, cascara with nux vomica, etc., the bowels gradually again began to discharge without assistance, and so continued with only an occasional need for further laxative administration. Various caustic and sedative applications were from time to time made to the ulcer in question, but little or no reparative progress was obtained in the local disturbance; yet there was one feature in the case that was encouraging, *viz.*, the slow but steadily taking on of flesh and increasing of strength: this, together with her age and the healthy condition of her blood, as was noted by a differential count, enabled me to exclude a possible malignancy. Even this, however, did not prevent discouragement and apprehension as to whether or not I might be wrong as to the true nature of her

disease; therefore, after about four months' treatment, with the result as above stated, I communicated with Dr. John Clarke, of the University of Pennsylvania, and obtained his consent to assist me in a more thorough study of the case, and, if possible, to determine without further delay the true cause of her illness. Accordingly, arrangements were concluded, and she was taken to the University Hospital, where, after her admission, Dr. Clarke made an examination, a report of which is herewith attached.

December 6, 1902.

Examination made under ether by Dr. John Clarke, reports as follows:

In the vaginal fourchette there is a small fistula of such small calibre as to barely admit a fine probe; this leads backwards into the rectum. The cervix is slightly enlarged, but normal. The uterus is normal in size. Marked induration in the left broad ligament. Tubes and ovaries normal. No serious pelvic lesion. Rectal examination with the electric proctoscope reveals an ulcerated area on the anterior rectal wall. This does not bleed readily and does not present any evidence of malignancy. Temperature and pulse normal. Cultures made for possible dysentery. Ulcer was curretted and pure carbolic acid applied to it.

Treatment—She was ordered a suppository of ichthyol daily and the rectum was irrigated with protargol (1-500) every day.

Bacteriological Report of the Scrapings.—Agglutination test with patient's blood and stock cultures of B. dysenteriæ was positive—perfect clumping occuring in twenty minutes with low dilution. There was actual bacteriolusis in less than four hours with dilution 1 to 25. Hanging drops sealed and kept for three days exhibited no tendency of the clumps to break and grow. Used as control with the typhoid bacilli, which was negative throughout, at no time was there even cessation of motility. As in the above, hanging drops were sealed and kept for three days, at the end of which time the typhoid bacilli had grown into a seething mass.

The colon bacilli isolated from the case were negative to the patient's blood.

Sixteen plates were inoculated and the B. dysenteriæ appeared after forty-eight hours' incubation. There were sub-cultures made which gave positive agglutination reaction with the patient's blood, and anti-dysentery serum corresponded, culturally and morphologically with the stock cultures of B. dysenteriæ.

December 21st.—Dr. Clarke again examined the rectum with the proctoscope and found the ulcer in a clean, healthy condition, without any apparent dimunition in its size. Fistula remained unchanged. Temperature and pulse continues normal. Patient discharged to go home for a week, December 25th, 1902. Owing to a strong inclination to remain at home, which was seconded by her family, and acceded to by her husband, she refused to return and continue treatment at the hospital.

From this time until the present, she has been seen at varying periods of every day, every second day, and now every third day with recently slow, but apparently positive improvement in the local lesions. Her general health continues to improve rapidly, and she is at this writing heavier than ever before; she is able to go about wherever she chooses, and does the greater part of her household work. Though the local condition is noticeably improved, being in measurements about one-half and three-quarters of an inch or less in diameter, less angry looking in appearance, and presenting the evidence of a slowly healing ulcer, nothing definite can be stated as to the time of the final healing.

Three microscopical examinations have been made from the swab since the early part of February with negative reports as relates to the amœba coli. Whilst the discharges from the bowels are no longer characteristic of dysentery, every few days there is quite a discharge of jelly-like matter such as is often discharged by hysterical patients, with an occasional discharge of a little blood. This may be explained through the continued congestion and over glandular action of the colon and rectum, which occasions the mucoid secretions, and this lying in juxto position with and passing over the ulcer becomes colored with the free discharges from the same.

My apology for reporting a single case of this disease, and that before its entire recovery, is embodied in the following suggestions, which seem to me to be of more than casual interest, and which may be summarized briefly as follows:

1st. The very small number of cases reported up to this date from the eastern and north-eastern portion of the United States, and its probably more frequent occurrence than is recognized.

2d. The persistent and stubborn resistance of various and all treatments administered for a period of several weeks, and subse-

quently, the very slow yielding of the local lesions to continued direct and varied applications, for a period of more than five months, and this in the absence of the amœba coli, so far as microscopical study of the discharge revealed.

3d. The very rapid and satisfactory progress in the patient's general health for the corresponding period, which would seem to indicate the very slight influence of the local lesion remaining, after the disappearance of the amœba, on the patient's general or systemic forces, emphasizes the importance of a correct early diagnosis of the disease, a more familiar acquaintance with the specific cause and differential symptoms, and a knowledge of a more speedy treatment of the local lesion than the writer has been able to find.

DISCUSSION.

DR. JUDSON DALAND, of Philadelphia.—The case reported is one of considerable interest, because such cases are not numerous in this part of the country. Amœbic dysentery is particularly interesting because of its close association with this special parasite, an organism which is fortunately rather easily discovered in the fecal discharges. The demonstration of the presence of this amœba is necessary for the diagnosis. Its relation to ulcerative processes in the colon has been brought out thoroughly in the paper. A very interesting point in the relationship which it bears to the ulcers is that often there are also present the micro-organisms of suppuration. I have been particularly interested in the association of various hepatic disorders with this form of dysentery. This explanation of multiple hepatic abscesses is one of the most interesting in the study of the causation of disease. It is believed that the amœba includes within itself these various organisms of suppuration, and that they are swept along in the blood current and lodge in the liver. Here begins a new focus of suppuration, thus explaining many cases of abscess of the liver occurring more especially in the tropics, which would otherwise be inexplicable.

The cases presenting themselves in Philadelphia for observation are few. I have been particularly interested in the chronicity of the ulcer in the case reported. It is quite possible that the ulcer discovered in this patient is not the only one present, and that there are others higher up beyond the field of vision. Fortunately the ulcerations are not usually deep, and perforation is not very common. We can, therefore, treat these cases topically by means of enteroclysms. Some benefit in these cases may be derived by the use of quinine solution.

We all know the effect of quinine on the parasite of malaria, which is also an amœba, and it has been proven quite conclusively that quinine exerts its beneficial influence particularly when the amœbæ are free in the blood and are not confined in the corpuscles, showing that it is the direct action of the solution of quinine in the blood. I would suggest that the colon be thoroughly washed out and then a solution of quinine be brought in contact with the ulcer. I have also used injections of a dilute solution of hydrogen peroxid.

DR. PHILIP MARVEL, of Atlantic City.—I wish to correct a false impression conveyed by my paper. I have learned that some of the gentlemen present understood the curettage to be a curettage of the bowel. This was not the case; it was a curettage of the uterus, and the operation had no connection directly with the dysenteric disease, and was employed simply for the accompanying condition requiring treatment. It was only referred to because there was a pyosalphinx complicating the trouble, and the condition continued throughout the earlier part of the disease, though finally rupturing and discharging itself. The resulting endometritis was what demanded curettage of the uterus. The effect of this operation on the general condition of the patient was really wonderful, and its action on the dysenteric discharges was also very decided. Quinine was not used locally in this case, but it was administered internally. The reason for this was that Dr. George Dock, of Ann Arbor, had reported a case in which he had used a solution of quinine, varying in strength from 1 to 1,000 to 1 to 500, for a considerable time in a case under his observation without any satisfactory results. The same investigator also made use of benzozol without any apparent beneficial effect. I am not aware of any topical applications that have been used with special benefit upon the local lesions. The cases which have been reported in the east and northern portion of the state have been from Philadelphia, Baltimore and Michigan. Dr. Dock seems to have followed his case with special care for a period of over five months. The patient finally left him with the amœba still present in the stools and scrapings, and with the ulcer unhealed. The cases at the Johns Hopkins hospital were possibly more favorable, but a long time was required for the healing of the ulcers. The chronicity of these cases is certainly very great, and we are not prepared to say at present how long they last. In my case, the ulceration continues in spite of the fact that we are unable to find the amœba present in the stools or from cultures made from swabbing the ulcer direct.

OSTEOPATHY.

BY DANIEL STROCK, M. D., CAMDEN, N. J.

This short paper is prepared with the object of giving the members of this Society some idea of what osteopathy is, and what claims are made for the system by its votaries, as there is much misunderstanding of the subject, even among the medical profession.

The word is compounded from osteon (a bone), and pathos (suffering).

The various journals and announcements published in the interest of this so-called school of practice point with pride, evidently, to the fact that the word also has a legal definition, as by statute of the State of Missouri it is declared to be "a system, method or science of healing." Other states, as North Dakota, Iowa, Michigan and Vermont have given the word a legal definition and the system a legal status.

This method of curing disease is claimed to have been "discovered" in 1874, by a gentleman of Kansas. The discoverer reasoned that "A natural flow of blood is health, and disease is the effect of local or general disturbance of blood—that to excite the nerves causes muscles to contract and compress venous flow of blood to the heart; and the bones could be used as levers to relieve pressure on nerves, veins and arteries."

"Osteopathy is a system of treating disease, without drugs, by the use of the hands to adjust all parts of the human mechanism to perfect mechanical relations. It is that science which finds in disturbed mechanical relations of the anatomical parts of the body the causes of disease, and which is employed to cure disease by applying technical knowledge and high manual skill to the correction of all disturbed relations occurring in the mechanical arrangement of the body. It is a science founded upon the principles of anatomy and physiology.

"The word osteopathy does not mean the treatment of bones, nor of bone diseases. It was used as a name because the founder discovered the importance of disturbances in the bony framework of the body in causing disease. He studied the skeleton as the foundation of anatomy, upon which science he grounded his system. The meaning of the word applies not only to derangements of the bony parts, but as well to disturbed relations of ligaments, tendons, blood vessels, muscles, nerves and of any body tissue."

They are committed to the doctrine that "Mechanical displacements and pressures are the great causes of disease; the pressure caused by a slightly slipped vertebra, a contracted muscle or an over-developed ligament, acting upon blood vessels, to lessen blood supply and nutriment to a part, or to cut off the nerve influence."

The deplorable condition of the patients who come under the observation of the practitioners of this method of treatment, and the miraculous cures effected, are best described by quoting from a paper read at one of their conventions held recently. The writer of the paper had evidently discovered more than one "new disease," but he was equal to the occasion in every instance, as it isn't recorded that any of the patients got away from him uncured.

Case A.—"Retroflexion following childbirth. Treatment was applied to correcting slipped innominates, both of which were up and back."

This case illustrates the importance of getting hold of this class of injuries before they have had an opportunity to sit down hard; whereby they incur the risk of pushing the innominate bones up in the axillæ, thus greatly complicating the treatment.

Case B.—"Miss A, troubled with very painful periods; anteflexion. Entire lumbar region was posterior. Second lumbar vertebra turned to the right; fifth sensitive. Treatment consisted in correcting the spinal irregularities."

Evidently the favorable condition in this case was that the second lumbar vertebra did not turn to the left. How often patients are ignorant of the providential interventions in their behalf.

Case C.—"Miss M, leucorrhœa; sacrum tilted backward. Treatment: adjusted sacrum."

The lesson taught by this case is, if the condition had not been discovered, that sooner or later the young lady would have doubled up like a jackknife, if engaged in the performance of some of the natural functions of the body, particularly while strolling in the country, or at a picnic.

Wonderful as these cures are, and related with such self-complacency, we can yet imagine the chagrin of this reporter when he learns how skilled are the osteopaths of California. I am informed by a medical colleague who had recently returned from that State, that, in a conversation with an osteopath, the latter assured him that he had cured a case of displacement of the odontoid process amounting to at least

a half-inch. After prolonged treatment, the individual recovered. There is no history that this patient had been hanged, but the case shows how, in the future, judicial mistakes of this character may be rectified under osteopathic auspices.

These are a few examples of the conditions claimed to be found by osteopaths, under their superior methods of examination. Apparently, they experience no difficulty in detecting these enormous bony displacements, notwithstanding they have escaped the observation of all other physicians, and are of a character to produce either instant death or complete loss of the power of locomotion. But it is not for such disabilities these patients receive treatment, and have their vertebræ, the sacrum and os innominatæ replaced; the attention of these skilled diagnosticians are directed to these great deformities only because they find a retroflexion, an anteflexion, or painful menstruation. Having discovered these minor irregularities of the female sexual organs, then they know where to look for the cause, and apparently they readily find it; particularly if they have a credulous patient. And judging from the reported cases, many of their patients are of that class.

Even a case of indigestion suggests to them the necessity of examining the vertebral column for luxations, and the search is invariably successsul, according to the statements made by writers in the journals devoted to the dissemination of knowledge of this wonderful "system, method or science of healing." It is quite evident that no patient need depart from the presence of an osteopath without knowing exactly what is the cause of his illness, even though it be nothing more gross than a slight turning of a vertebra to the right or left. In fact, it is the detection of the minute displacements of the bones of the vertebral column that constitutes the "strong holt" of the osteopathic professor. We can imagine with what fine scorn, even though it be unexpressed, he listens to the young man who tells of finding the innominate bones up and back, or the whole lumbar region posterior, or the sacrum tilted backwards. It must seem to him that even osteopathic babies would be equal to the discovery of such immense lesions of the human body. And how crestfallen and despairing must the enthusiastic young man become, when subsequently he hears the professor relate the histories of numerous cases of dyspepsia, of diarrhœa, of appendicitis and other diseases he has cured, by first detecting the "slight displacement of the vertebra"

that was the cause of the symptoms. We can imagine the young man, in self-communion, wondering how he can ever hope to attain the skill that will enable him to detect a misplaced odontoid process, or a "slight" slipping of a cervical, dorsal or lumbar vertebra—a "slipping" so little that the sum thereof is represented by the smallest fraction of an inch, a la the professor.

And it is evident that this young man, if hopes to become a successful osteopath, must become thus skillful; that is, skillful enough to make his patient believe that any of these lesions are found upon his person.

After having found the cause of the disease, and we will presume the patient has appendicitis, "the osteopathic method of treating these troubles is by manual manipulation, to correct this physicial cause. This is not done by massage or Swedish movements. If a vertebra is out of place, it is replaced by using the arms and legs as levers." Exactly on the principle, we presume, that a mechanic might attempt to move a building by swinging its doors—and with exactly the same result.

The advertisements of those who modestly claim to be "recognized specialists" in osteopathic treatment, states that all chronic diseases are treated, and that "eighty per cent. of these we cure outright; ninety per cent. we greatly benefit." While no mention is made of curing smallpox, or even soliciting cases to treat, yet there is evidently great confidence in their ability to treat diseases of the female sexual organs, and their advertisements vie with similar ones to be found in certain newspapers of our large cities.

One of the advertisements diffidently says: "While it is not customary to advertise osteopathy," yet enumerates fifty-seven diseased conditions treated by this method, among which are "uterine affections, vaginal affections, female irregularities, suppressed or excessive menstruation and leucorrhœa."

There is one feature about osteopathy that must commend it to individuals of a certain class; that is, that it isn't particularly difficult to become an osteopath. One college advertises that the minimum qualification for entrance to the course is a "good common education and average natural ability"; and after this difficulty of admission is overcome, the student is permitted to take the course, which "covers two years."

Another commendable feature, which must also appeal strongly to

the class of individuals mentioned above, is the evident elimination of the sentimentality that has been in vogue during the past in the treatment of the diseased and dying. Business principles alone must prevail, as is evident from statements made in a college announcement, that "there is, perhaps, no profession at the present time that offers facilities for so quickly acquiring financial independence as that offered by osteopathy. * * * Conservative professional minds, those competent to judge, declare that the future possibilities of osteopathy, in a financial way, are unsurpassed. * * * Two of the business principles of its success are, the fee of practitioners is everywhere just the same; the universal practice of osteopaths is to require pay in advance."

Evidently, these appeals to that industrious class, who want something easy to do, do not fall upon unheeding ears, judging from the number of so-called colleges of osteopathy that are blossoming throughout the country, and bearing fruit—such as it is.

The legal standing of a practitioner of osteopathy in this State is a matter of interest to all regular practitioners, and, until recently, it was an unsettled point. But the honorable Wilbur Heisley, presiding Judge of Monmouth Quarter Sessions, so clearly interpreted the statutes bearing upon the practice of medicine in New Jersey, during the trial of a cause before him, that, without doubt, subsequent efforts to influence the Legislature in the interest of osteopathy is directly traceable to that decision.

The learned judge said: "The thirty-fourth section of our statutes seems to prohibit any one from practicing the healing art under any system unless he has first passed an examination and received a license. Apparently, the Legislature meant the inhibition to apply to all systems of any kind, not alone to systems or schools of medicine or surgery in which drugs are used or surgical operations are performed; because the last clause of the thirty-fourth paragraph provides that the provisions of this act shall apply to all persons professing and attempting to cure diseases by means of the so-called system of faith curism, mind healing, laying on of hands, and other similar systems." I do not find a similar clause in the statutes of any other State, and am obliged to believe that the Legislature deemed the subject of such vast importance that no one should be permitted to administer and prescribe as a practice for the curing of disease unless with the permission of the State Board of Medical Examiners,

and that this board was to be the sole judge of any and all systems and of the fitness of the person to administer to the sick.

"This defendant did advertise himself as a physician for the curing of 'nervous and chronic diseases.' He thus called attention to the fact that he was able to treat as a physician the sick, and it seems to me that the question of what system or school he followed is a matter of no moment, because, under the statute, as I interpret it, he had no right to practice any system whatever, medical or religious, such as the laying on of hands, without a license. I find the defendant guilty, as he stands charged in the indictment."

This decision closed the doors of this State to the osteopath, if any one would enter proceedings in the courts against him; and, as a result, during the last session of the Legislature a bill was introduced having for its object the legalizing of this method of healing. The bill was defeated in committee, largely through the unanswerable arguments of the President of this Society. The attempt having been made to legalize this "system" of medical practice, it behooves the profession of the State to be alert, as the advocates of the measure have simply retired, and may be expected to renew the attack.

In conclusion, the objections to osteopathy may be summarized as follows:

It is not a system of medicine or surgery.

The instruction imparted to its practitioners is inadequate.

There is no reason why one of the minor agencies of practice should be dissociated from general medicine.

To legalize it would afford unscrupulous individuals the opportunity to suppress the evidence of their incompetency by writing a death certificate.

DISCUSSION.

RICHARD COLE NEWTON, M. D.—In the early 70's, General Stewart L. Woodford brought to Brooklyn, N. Y., an Italian woman called Madam Dolchivi, whom he had met in his travels and who had treated his daughter, then suffering from hip disease. This woman, it is alleged, could neither read nor write, nor could she speak a word of English. Her fingers were covered with rings and she was at this time an old woman, perhaps seventy years of age. She treated diseases by manipulation and rubbing, and she had done so for a number of years; claiming that she had discovered from manipulating animals, that diseases might be due to slight displacement of the

bones, and that by her treatment, she restored these bones to their proper relations with the surrounding parts, and thus cured the diseases. She also claimed to have an extremely delicate, or highly developed, sense of touch, by means of which she was able to discover and correct the alleged slight displacements or malformations of the bones and their surrounding tissues. It is alleged that on account of her remarkable success in the treatment of disease, she was accused of being a witch, and had been imprisoned for witchcraft or necromancy three times in Europe. She opened an office in Brooklyn, N. Y., in, I believe, Gates avenue, and practiced there for a time, about 1876, treating a large number of patients.

Here then we have, gentlemen, the practice of the so-called science of osteopathy, at least several years before its alleged discovery by "Dr." Still, which the *Journal of Osteopathy* informs us was in 1874. Norman D. Mattison, D. O., informs us that "the science of osteopathy was discovered by Dr. A. T. Still, of Kirksville, Mo., in 1874. The original discovery was only the principle, its development required years of research, study and experiment. Dr. Still's first students were his sons when he began teaching in 1887. The American School of Osteopathy, at Kirksville, Mo., was founded by Dr. A. T. Still, and was chartered by the State of Missouri in 1892." *There is no question, then, that the "system" was not the invention of A. T. Still as claimed*, and there is little probability that the ignorant Italian woman, brought to this country by General Woodford, was the founder, discoverer, or originator of this system. Both Madam Dolchivi and "Dr." Still probably learned this interesting theory from a common source, and a sufficient amount of time and trouble spent in following up this clew would doubtless reveal the true author of this system of treating disease. Even as Hahneman was not the true author of the celebrated doctrine expressed in the dictum "Similia, similibus curantur," so Still is not the true author of osteopathy, and inasmuch as he claims to be such, he is an impostor and unworthy of credence.

As Dr. Bodine testified in the well-known case, Nelson *vs.* the State Board of Health of Kentucky, "Osteopathy is the *ne plus ultra of absurdity*," and the testimony in that case showed beyond all room for doubt, that the school at Kirksville was entirely inadequately manned, endowed or equipped for the teaching of any sort of physicians or surgeons to whom the care of human life might be intrusted.

That anatomy, the alleged stronghold of the osteopaths, has never been taught there by dissection, and demonstrations on the cadaver, the only reliable or effectual method of teaching this difficult branch, which the osteopaths claim as the principal bulwark of their system, just as it is without doubt the foundation stone of honest medicine.

The testimony in the case above alluded to, showed that "Dr." Still had claimed to have graduated from a medical school in Kansas City in the '40's, when no medical school was carried on at that place in those years.

Of the fourteen teachers of the school of Kirksville, only one wrote M. D. after his name, and he was at that time under indictment for felony in at least two different states. Examination into the educational claims of the graduates of this institution, will probably reveal that their education is of the crudest sort, and as someone has said of their practice, they are only masseurs, and not first-class ones at that.

How does it happen then, that they have achieved so considerable a measure of success? They have received a legal license to practice in eight or more states. They are practicing with more or less success in many states and claim to be constantly growing in numbers and increasing in influence. A number of other schools besides the one in Kirksville, Mo., have started up. Of the numerous irregular systems or methods of practicing medicine, which have been started in recent years, this would appear to be the only one that has achieved much vogue with the people. Probably Eddyism has more converts in the east than osteopathy. But this is the only system of treatment, or rather non-treatment, which can be said to rival osteopathy in the number of its dupes. The question that most interests us is the practical one. Why have these unlettered and ignorant men and women, professing an absurd and impossible theory of practice and claiming to do what no one can do, even if he has a touch so acute that he can detect a human hair under twenty sheets of paper, as we are told these charlatans have learned by long practice to do—why, I say, have they succeeded as well as they have?

I have no hesitation in answering that it is because they have been able to help a large percentage of those who have applied to them for relief. A short consideration of their modus operandi and its results may not be uninteresting, and I think we may learn something

from studying their methods. Ambrose Parè did not dislike a quack if he could learn something from him. A recent writer has said "Nothing is more characteristic of fruitful men than their ability to take suggestions from every quarter." So then, let us not make the mistake of dismissing this subject too hastily and failing to discern the important kernel of truth in the midst of the bushel of ignorant and foolish bombast.

In the first place, probably all irregular systems of practice have more or less that is practically valuable in their application, and this system is no exception to that rule.

Secondly, the public care very little for the theoretical or historical aspects of our art. They only concern themselves with results, and will go to the worst quack, just so long as they think that he or she can help them.

Thirdly, this so-called system is, so far as the unthinking public goes, as yet entirely novel, and possesses all the charms of novelty.

And fourthly, it has been pushed with astonishing assurance and persistence, and as Pliny observed many years ago, "any one with a sufficient stock of impudence may reasonably well pass for a physician.

You may ask me upon what I base my assertion that this method of treatment has done good in individual cases. I reply from personal knowledge partly and from a considerable accumulation of testimony from those who have undoubtedly been benefited by it. It is right here that I think the profession may learn something. Cases that would ordinarily have received very different treatment are pulled and jerked about in royal fashion by the osteopaths. Cases of heart and liver disease, of diabetes, rheumatism, neuralgia, etc., that greatly need the vigorous manipulation which the osteopaths give them, do not get it from us. We may advise exercise, but we do not take the time to see it carried out. These gentlemen, however, administer it themselves in a liberal fashion. Our gouty lithemic, hysterical and neurasthenic patients as a rule hate the word exercise, and carefully avoid even the semblance of perspiration. They overload their stomachs and injure their digestions by rich cooking, sweets, wine and tobacco, and are too lazy, or too busy, to take the necessary bodily exercise. We, if we are honest with them, tell them that their troubles are due to their own self-indulgence and must be overcome by abstinence and self-denial, and by exercise, and by promoting

the action of the skin and bowels. How much nicer! How it saves one's *amour propre*, to be told that the third cervical vertebra has slipped and that a certain number of treatments will restore it to place and keep it there. Then these practitioners proceed to administer the massage that is needed, and some of them, in fact, I dare say, the most of them, also make the skin act by hydropathy, or hot air, or steam, or some other mechanical means. It is another example, and a striking one, of fools rushing in where angels fear to tread; and the lesson to be learned from it is that we have been too backward about ordering and enforcing bathing, rubbing, stretching and rotating stiff and diseased joints, and about using these mechanical methods in many serious, and more or less incurable and irresponsive diseases.

When Oertel brought out his treatment for heart disease by graduated hill-climbing, etc., the medical world was dumbfounded, just as they were some years before by finding out that fever cases get well more quickly and more surely in tents than in houses, and a few years before that, by the discovery that neither food nor water should be withheld in fevers as had formerly been done.

It is our duty to inform the public of the hollowness of the pretensions of these charlatans, and at the same time to acknowledge that the massage and the fierce twisting and bending of the joints, to which they subject their patients, are good and valuable methods of treatment in properly selected cases.

Numbers of cases of injury from the indiscriminate application of this method have come to my knowledge, and there is danger that the public, hearing of such cases, may lose sight of the good accomplished, and the system may meet with too sweeping condemnation. We should strive to conserve what is good in it, but it had better perish from the earth than to be left in the hands of the ignorant people who now administer it, and who subject tubercular, rheumatic, cancerous and syphilitic and hysterical lesions to the same identical treatment. That they have not done more harm is perhaps a wonder, but the dead tell no tales, and of the surviving victims of quackery that same vanity and weak judgment which lead them to stray away from the regular profession will often keep their mouths sealed, although they may realize that they may have been duped.

The quack will always be with us, and many and varied are his methods; let us search out the good that we may accomplish and

the reason for it, and if practicable, use it for the benefit of our patients, and not be too proud or too narrow-minded to learn from any one.

The Eddyites, the mind curists, the strict homeœpaths, the Dowieites, etc., demonstrate every day how comparatively well people may get along without any treatment except in some cases the mental stimulation of being assured that nothing ails them, and their symptoms are only beliefs; and in others of having solemnly administered to them at regular intervals totally inert doses of alleged remedies; while the osteopaths, the hydropaths, the magnetic healers, etc., demonstrate plainly enough that certain classes of cases are more benefited by mechanical therapeutics than by drugs; while we must acknowledge that a wise administration of drugs is our sheet anchor in the treatment of most diseases, and is, and probably always will be, a far more important and valuable method of therapeutics than any other. We also cannot fail to perceive that a healthy body is one that normally performs all of its functions, and that a body in which assimilatiom, elimination, metabolism and growth are not normally performed is not healthy, and further that any procedure which tends to restore these functions to their normal activity is often better and more rational treatment than the exhibition of drugs.

Let us point out the road to perfect health and urge our fellow-mortals to walk in it. Let us strive to arouse in them what Herbert Spencer so well calls a "physical conscience." Then, and then only, shall we have performed our highest duty to weak and suffering humanity.

CANTWELL'S OPERATION FOR COMPLETE EPISPADIA.

F. V. CANTWELL, M. D., TRENTON, N. J.

There seems to be some confusion in the use of the words "epispadia" and "epispadias." Epispadia is the condition, and epispadias is the person suffering.

Probably no congenital deformity is more distressing than complete epispadia, not even exstrophy of the bladder. In childhood the sufferer is a constant source of annoyance to the parents; in youth a burden to himself, uncompanionable on account of odor, his belly and thighs bathed in urine, excoriations occur for which there is no relief. In early manhood, when healthy blood courses through the

testicles and vague desires arise in his brain, he grows moody and melancholy and avoids company, for he begins to feel that he is unfit to accomplish that one act for which he has been ripening.

It was while in this mental condition that a young man ended his troubles by throwing himself beneath the wheels of a locomotive. I was called to view his body and found that he had complete epispadia. While dissecting his penis I was struck with the ease with which the cavernous bodies could be separated, and was led from this to devise an operation which has been successful, not only in my hands, but in the hands of several others in this country and England.

The operations described in the text books have all the same drawbacks, that the incontinence as a rule remains, and that several distinct operations are necessary, thus extending the period of cure over months. Thiersch has devised an operation for this condition which Billroth calls "one of the most brilliant in plastic surgery." He consumed one and a half years in the cure of one case. Thiersch's urethra is part skin. My urethra is made of the mucous membrane which nature intended for that purpose. In the operation of Duplay several incisions are made into the cavernous bodies near the pubes to straighten the penis. This is unnecessary, for, when my operation is completed it leaves a pendulous penis.

It is not my intention to go into the literature of this subject further than the cases which I have seen reported of my own method.

The aim in this operation is to restore the parts to their normal relations. To do this is simple. Loosen the urethral gutter completely; separate the cavernous bodies, place the urethra in its normal position beneath these bodies and bring them up over it, then with a few well applied sutures a normal organ is made.

It is necessary first to underdrain the field of operation by the establishment of a perineal fistula. A finger is inserted into the bladder and pushes out the perineum. A few strokes of the knife onto the finger suffice. If the opening at the infundibulum is too small for the finger a steel sound may be used. In order to keep the perineal opening patulous a specially devised drainage tube, or a piece of ordinary tube stitched fast to the skin is needful. The question arises whether to operate on the penis immediately or not. There is no reason for waiting, except that the ever-present excoriations may be a culture bed of bacteria, and so make it impossible to have a clean wound. In my own two cases I waited for ten days.

Where the urethra joins the skin in epispadia there is a distinct line of scar tissue on either side. It is along these lines the incision should be made to dissect loose the urethra. These incisions should be made to join above the infundibulum at the pubes, and are carried out to the extremity of the glans penis. They should be as deep as possible without injuring the cavernous bodies. Then the whole penile urethra should be dissected loose as a flap, having for attachment its continuation into the bladder. Then the cavernous bodies are separated by a blunt dissection, or by light touches with the knife. In the normal penis this would be impossible without injuring the fibrous envelope covering them. A short vertical incision is made in the glans penis.

Dr. Parham, of New Orleans, suggests that the urethra be cut off at its junction with the glans. Then tunnel the glans with a knife, or trocar, and draw the urethra through the opening thus made. This is a most valuable suggestion in the most difficult part of the operation, and the well-known extensibility of the urethra would make it easier and I believe better.

The urethral flap is placed in the gutter between the cavernous bodies and held in this position by two sutures through mucous membrane and skin tied on the under surface of the penis; a metal catheter is then laid on the urethra and a tunnel is formed by a continuous suture of the free edges of mucous membrane above the instrument. The corpora cavernosa are brought together above this and retained in place by continuous suture. The skin being brought together above these, a few well-applied deep sutures are taken in the skin and fat of the mons veneris. This leaves a perfect penis, with only a line of sutures along the dorsum.

There is usually free bleeding, but this is readily controlled by sutures and pressure. In my own cases I allowed the catheter to remain in during the process of healing. I now believe it causes swelling, and the bladder can be washed, if necessary, through the perineal tube.

As this condition is a very rare one, there is not much current literature on the subject. My own two cases were published in *Annals of Surgery*, December, 1895; since then I have seen four cases reported of this operation, and the results have been so good that it has led me to the writing of this paper.

Case 1.—Robust boy, aged eleven years, penis showed complete

epispadia; arch of pubes present, but slender; parts badly excoriated by continual dribbling of urine; he kept his clothes dry by the use of very thick pads of cloth. Perineal fistula made and ten days allowed to elapse. The seat of operation was found dry and skin free from excoriations. There was free bleeding during operation, but it was readily controlled. The urethral flap was unfortunately button-holed at the glans, this afterwards necessitated the use of bougies on account of the tendency to contract. The rest of the operation went smoothly. There was a great deal of swelling for some days after the operation, but this subsided. In three weeks the whole wound had closed, with the exception of a pin-hole opening at the site of the infundibulum. This persisted for six months in spite of efforts to close it, when it finally closed. In August, 1895, fifteen months after operation, he had a good penis, which, instead of being drawn up to form a cork for an opening into the bladder, hangs pendulous as a normal penis does. He can get a firm erection, and, although he still dribbles somewhat, he is proud of the strength of the stream he passes. He retains his water for more than two hours. He keeps dry by the use of the urinal. Since this was written, he has done such work as braking on the railroad. He has been married for two years, but I have not been able to find whether or not there are any children.

Case 2.—Sickly boy, aged seven, similar to Case 1, except that I had attempted a year before to repair his penis by a flap operation, which was a dismal failure, and left the penis worse than before. This operation was far more difficult, on account of smallness of the penis and the fact that the cavernous bodies were poorly developed. The child had tuberculosis of hip-joint and did poorly from the beginning. August, 1895, six months after, although the boy has not a good penis, he has a canal to the end of it. He has some control over his urine, and at times can pass a stream. He would be dry and comfortable with a rubber urinal.

Case 3.—Reported by Herbert W. Page, in the *London Lancet*, November 5, 1898. Boy, aged ten years, was first sent to me two years ago by Mr. Havell, of Felixstowe, but it was then decided to postpone operation until the parts were somewhat larger, and accordingly he was admitted again on February 22, 1898. There was complete epispadia with an infundibuliform opening above the pubes, from which urine was continually dribbling. Nevertheless, there was a slight amount of control and the passage of a catheter showed that

there was a well-formed bladder. It hurt him too much to attempt to pass the finger. The penis was small and ill-developed and was turned upwards, so that the glans lay over the mouth of the funnel. When pulled downward it was seen that the penile portion of the urethra existed as a flat band of bare mucous membrane, reaching from the dorsum to the rudimentary glans, back to the bladder opening, where it was lost from view. The corpora cavernosa clearly were there, but they occupied the under side of the organ. There was a good scrotum and both testes were to be found in it. An an attack of measles delayed operation until May 18, when as a preliminary step an opening was made in the perineum and a Watson's silver tube inserted in order that after the plastic operation the parts might be kept entirely free from the contact of urine. From this time forth, the boy lived night and day in a warm boric bath, a procedure which I do not doubt, contributed largely to the success of the operation, as well as to his own comfort. The perineal tube answered admirably and he never complained of it. The plastic operation was undertaken on May 20, and presented no difficulties save such as were entailed by formation of the urethra and accurate suturing. The urethral flap having been freed from the corpora cavernosa on which it lay, was moulded into a tube upon a catheter, fine catgut being used for the sutures. The corpora cavernosa were separated from each other with singular ease, and their subsequent union, together with the fixation of the new urethra in its rightful place beneath them, was made with finest silk. Finally, the skin along the whole length of the penis and over the infundibuliform opening was sutured with silkworm gut. A soft catheter was then passed by the natural route into the bladder, secured, and left there. Everything went well after the operation, but on May 24 there was so much œdema of the scrotum that I made several punctures in it, the perineal tube was removed, and one or two of the dorsal silkworm stitches were taken out because of obvious tension. The soft catheter was also taken out, cleaned and reinserted. More sutures were removed on May 26, and by June 1, the perineal wound was healed. Already the child had gained considerable control over the passage of the urine, and emptied his bladder at will through the retained catheter. He was still kept in the bath. By June 8, the retained catheter was discarded and the urine was drawn off twice a day, not with the object of emptying the bladder, but of obviating a

tendency to contraction at the meatus. Removal of the boy from the bath for a few hours revealed a slight leakage at the infundibulum, and accordingly, on June 18, a small plastic operation which need not be specially described, was undertaken for the closure of the tiny orfice which was alone the cause of it. This was successful, and after a few days longer in the bath the child was recorded, on July 1st, as being able to retain his urine for seven hours, as passing it naturally, and as being perfectly dry throughout the day. When discharged on July 7, it was able to retain his urine all night, and the only defect, if so it may be called, in the result of the operation was a slight tendency to contraction of the meatus, for which the daily passage of a catheter was recommended. The latest reports of his condition are in every way favorable, and he is now regularly at school.

Case 4.—Reported by Dr. D. W. Parham, of New Orleans, in the *New Orleans Medical and Surgical Journal*, for January, 1901. Through the kindness of my friend, Dr. E. D. Martin, I had recently the privilege of assisting him in the performance of this operation (done at my suggestion) upon a boy of five years of age afflicted with complete epispadia, the abnormal meatus being, as in Page's case, just under the pubic arch or slightly above it. Incontinence of urine was marked. The operation was done in October of this year. A pair of McArthur artery forceps was first introduced through the epispadiac meatus and made to bulge out the perineum. The point being cut out, a soft rubber catheter was pushed into the bladder and retained by a suture. The operation proper was then begun by cutting out the urethral trough bodily, by going well beneath it and lifting it freely from its place between the cavernous bodies. The dissection was carried well back to the infundibulum, the anterior wall of which was then caught with forceps and dissected toward the pubic arch until the whole urethra, almost into the bladder, was well mobilized and could be freely pulled out until it could be extended, as in Beck's operation for hypospadia, nearly up to the normal situation of the meatus. It then looked very much like an open alligator's mouth. It was converted into a complete tube by suturing the sides of this to each other. This being done, the corpora cavernosa were separated by blunt dissection assisted by occasional snips with the scalpel. The glans was partly split, so as to provide a place for lodging the new meatus.

The new-made urethra was then carried through to the under side

of the penis, and the meatus being sutured in place, the cavernous bodies were drawn in front of it and held together by a few sutures passed through them. The operation was completed by bringing the skin over the corpora in the median line. A very shapely organ was the result. The result, after healing, which was somewhat delayed and marred by suppuration of the skin flap, while not all that could be desired, was most gratifying. The urethra retracted a little back from its position in the glans, leaving it practically as a post-balanic hypospadia, which, I believe, may be ultimately corrected by Beck's procedure of urethral extension. In another case I would pierce the glans with a trocar or narrow-bladed scalpel and pull the mobilized urethra through to its proper position in the glans, and to prevent the disturbing effect of sepsis, I would keep the boy in the boric bath, as suggested by Page. When the boy was last seen, healing was completed, and the incontinence was so much improved that he could go regularly two hours or more without wetting his clothes, and we feel confident that as he gets older and he brings to his assistance the natural feeling of pride, the control will be almost normal.

Case 5.—Reported by Dr. James Bullitt, at meeting of A. M. A., 1903. "My own patient operated on in 1901, was a boy of seven years of age, otherwise healthy and well-developed. The meatus was beneath the pubic arch, and the foreskin hung down in a well-marked apron. On dissecting up the mucous membrane over the sulcus and glans penis, it was found impossible to avoid injuring this portion of the mucous membrane to such an extent, that it had to be dissected and cut away entirely. As a consequence, the new made urethra was too short; even after thoroughly mobilizing it and drawing it well forward, it could only be made to reach a point well behind the glans penis. It was, therefore, found necessary to adopt the suggestion made by Parham, to combine Van Hook's method of tubular canalization with Cantwell's urethral transplantation. Van Hook, in a case of hypospadias, made a canal by tunnelling through the glans penis and then lined this canal with a pendunculated flap, coverted by sutures into a tube, taken from the preputial hood. The distal end of this flap, now became proximal, was finally sutured to the distal end of the urethra, so completing the canal. In my case, a sufficient flap was cut from the underlying preputial apron, was then converted into a tube by suture, and finally was drawn through a tunnel made through the glans penis. It was then united over a soft catheter to

the already formed proximal portion of the urethra. The remaining steps of the operation were carried out in accordance with Cantwell's recommendations. The success of the operation was surprising. With the exception of a pin-hole opening, situated a little in front of the pubic arch, there was a healing throughout by first intention. At the end of ten days the perineal drainage was withdrawn, and three weeks after the operation, the boy was exhibited to the Falls City Medical Society. He had been instructed to retain his urine for several hours before exhibition, a thing utterly impossible before operation. Just as he was undressed and placed on the table, he found it impossible to longer contain, and gave a representation of the Brussels' fountain boy, discharging several ounces of urine over the table and carpet in a most beautiful stream, from a meatus situated at the end of the glans penis. Singularly enough, I found the closure of the pin-hole fistula more difficult than the original operation. Having failed in one effort to close it, opportunity has not yet again presented to successfully deal with it. The boy's continence has markedly improved. A recent report informs me that there is occasional dribbling by day, and sometimes wetting of the bed at night; but this latter is not by dribbling, but by voiding at one time a bladderful of wine.

"In conclusion I desire to say that I feel satisfied that no other operation, in my hands, could have produced anything like so good a result, in anything like the short space of time."

Herbert Page, in his article, says: "That the operation is either not known or not appreciated as I think it should be is clear from the fact that the most recent book on operative surgery published in this country makes no reference to it, and I think the operation is an admirable one alike in its conception and in its practical value for the cure of a most distressing congenital deformity. I have had one case only, but I believe that my friend, Dr. Clutton, has treated two or three by it with complete success. It may be said that the result of the operation far exceeded our expectations, and while but small experience can be gained from one case only, I feel nevertheless that the record of it may be of use in calling the attention of surgeons to an operation of unquestionable value for the treatment and cure of a malformation so grievous and distressing as that of complete epispadia.

Parham, in his article, in speaking of the operations of Thiersch and Duplay, says: "However admirable the result of these procedures

may be, and they are, as seen in quite a number of successful cases, still the length of time required to obtain a final cure has been so great as to deter many of us from embarking upon this sea of operative difficulties. Thiersch worked one and one-half years to cure one of his cases, and remarks that not less than three months should be consumed in the treatment of most cases. Pozzi got an excellent result by this method in three seances, but such cases as his are rare; most of us would grow weary of waiting for the result, to say nothing of the patient. Any method which would give even as good results, but in much shorter time, would be welcomed by the surgeon. Such an operation, I believe, is that suggested by Cantwell, of Trenton, N. J., in 1895. Indeed, our experience in this one case both Dr. Martin and myself can say without reservation that this operation of Cantwell's is by far the best yet devised for the treatment of epispadia. The possibilities of a combination of the suggestions of Cantwell, Weller Van Hook, Beck and Nove-Josserand in the management of the many variations of this interesting malformation will broaden the operative field of both epispadia and hypospadia, and surgeons will have cause to be grateful to the genius of American surgeons for giving us these notable additions to our resources."

No operation springs, Minerva like, perfect from the brain of its author. I must thank these men for the many valuable suggestions which add to the simplicity, convenience and certainty of this procedure.

For the reason that these suggestions are found in their reports of cases, I have embodied so much of their articles in this review.

A proof that this operation is a typical one for this deformity, is the fact that when completed, we have a penis normal in the relation of its component parts and normal in appearance. In some of the cases, the incontinence has disappeared, and to crown the whole, my first patient became the father of a bouncing girl on May 22, of this year. As far as I know, this is the first time that a complete epispadias has become the father of a child.

INFANTILE COLIC.

BY ALEXANDER McALISTER, CAMDEN, N. J.

Many little things are in reality the great things of life. The observation is that of a philosopher, simply borrowed for the occasion. The statement has a threefold application to infantile

colic. It applies to the infant itself, especially in its earliest life; to the mother, particularly if she be young and inexperienced, and to the family physician. By the law of continuity, it applies as well to the infant's father, but this observation of the philosopher we will not stop to borrow.

It need not be remarked that colic is one of the first thorns in the infant's pathway, and of frequent occurrence, especjally in infants deprived of breast milk; that colic is merely a symptom; and that its presence and prevalance are only exceptionally indicative of disease. Disease is rather a result of an attack of colic upon the comforts of the infants and the household in general. Colic is a discordant note in the tenor of the young life, an indication of the presence of a disturbing factor by no means always arising from improper food or faulty digestion.

It is not the present purpose to write exhaustively, but simply to call attention to a few pertinent points in the causation, diagnosis and treatment of infantile colic.

The most commonplace and trivial circumstance, in the life of the mother may excite an attack of colic in the tender nurseling. An irregularity in her diet, her physicial activity or her mental equilibrium may be the sole and unexpected exciting cause of an attack or repeated attacks of colic. Thus a toothsome condiment sparingly indulged, moderate exercise and a mild burst of passion in the mother may yield the same disturbance in the physicial atmosphere of the infant.

On the other hand, lack of cleanliness in the nursing bottle or nipple, too rapid feeding, too frequent or too long deferred feeding in the artificially fed, may be enumerated as common causes of attacks of colic. On this score alone, the hose and nipple equipment of nursing bottles cannot be too strongly condemned. The long tube and small nipple present a number of nursery conveniences which should never offset their one great disadvantage. With the greatest possible care they cannot be kept sufficiently clean and hygienic. On the other hand, they are always of too great immediate service for the infant's best welfare. The writer recommends only the bottle nipple. Nature has wisely designed that even the tenderest infant shall pay the price of labor for its sustenance. This it is always compelled to do when drawing milk from the mother's breast. At birth its cheek muscles are already well developed for

this sole purpose. In the normal amount of labor expended to secure the breast milk, the salivary glands are vigorously stimulated and the milk reaches the stomach well mixed with saliva.

These ideal conditions are seldom duplicated in artificially fed infants. Rubber nipples are more easily plied than fleshly nipples. They are of necessity patulous and yield milk rapidly and with comparatively little labor on the part of the infant. After several nursings, rubber becomes soft and admits of a veritable stream without much effort. For these reasons infants prefer rubber nipples, and it is a stubborn fact that when they have had rubber nipples for a short time they will not again return to breast nursing.

This subject is treated so fully in order to emphasize the importance of proper care in the selection, use and rejection of nipples. Probably half the nipples in the shops should never be used, or be used only a few days. The best should not be used more than ten days or two weeks. It is the writer's uniform practice to restrict the use of any nipple to two weeks, and to order the employment of two nipples, that one may lie in an alkaline cleansing wash while the other is doing service.

As a rule an attendant should always hold the bottle while the infant is taking nourishment. Only in this way can the evils of too rapid feeding be avoided.

Mothers frequently charge their infants with excessive greed and rightfully attribute to this, attacks of colic. In many such instances, the fault is not in the infant, but in the nipple. What is interpreted as greed, is simply effort to avoid choking. The volume of milk passing through the nipple necessitates rapid swallowing, and what seems to be voracity, is in reality distress.

The diagnosis of colic is not always correctly made without a careful physicial examination. Mothers may judge wrongly. The cry which the mother quickly accepts as an infallible sign of colic is only an expression of distress, which may, or may not be due to pain, especially in older infants.

Pain in the very young may result from soreness incidental to birth, griping accompanying the earliest movements of the bowels, urinary retention caused by phimosis, renal colic and kindred incidents in the establishment of normal functions. In older infants, earache, teething, soreness in the abdominal muscles, tender joints due to rickets and other painful maladies, must be considered in the diagnosis of colic.

The signs of colic are well known, but require for their recognition more or less physicial examination. These signs are hardness of the abdomen, palpation of coils of intestines, tendency of the infant to draw up the legs and the expulsion of flatus, accompanied by vigorous crying. Cessation of crying after the passage of flatus is, of course, always a sign of the proper diagnosis.

Errors in diagnosis not infrequently lead to misapprehension and early weaning with disastrous results. The infant has discomfort which is at once wrongly attributed to colic. The usual household remedies bring no relief. Hunger supervenes upon copious draughts of hot water and crying continues. At this junction, charges are made against the breast milk. The infant is offered a nursing bottle and its entire future at once assumes a different character. In this disastrous transaction, the family physician, willingly or unwillingly, is not infrequently a party.

In the treatment of infantile colic too careful circumspection in the use of drugs cannot be practiced. The prompt relief which narcotics affords has power to hypnotize the dearest guardian and entail serious results upon a helpless life. A drop of paregoric is but the forerunner of ten drops, or of that still more charming dose, a drop of laudanum, and this point reached, the seeds of a drug habit, or, later in life, an alcohol habit, are securely planted. The fact that the family physician ordered an opiate on a certain occasion is too frequently taken by parents as authority to use opiates on every occasion. The tendency to use the soothing syrups of the shops needs no encouragement. All these and kindred facts merit due consideration in the treatment of colic.

Many cases can be promptly relieved by a little manipulation of the infant, with or without gentle massage of the abdomen. This method of treatment would be too trivial for recognition in this connection were we not considering little things of life. On the other hand, it may be observed that the family physician may not infrequently render the highest service by instructing the mother or nurse how to jump an infant, abdomen down, in order to secure relief from colic. Many cases of so-called colic are simply flatulency, or in nursery parlance, "wind on the stomach." In all such cases manipulation is the only legitimate treatment.

Next to the foregoing, the remedy of greatest value in the treatment of infantile colic is warmth. This may be applied to the

abdomen dry or moist, or employed internally in the form of sips of hot water, or of hot enemas. Friction with warm oil along the line of the colon is of special value because combining warmth with manipulation.

The most unique means for applying warmth in the treatment of infantile colic is a small hot water bag. The writer has found these bags generally serviceable, and never fails to order one when such treatment is required. They may be utilized in very young infants with entire satisfaction. Infants will fall into quiet sleep with a bag resting upon the abdomen. The treatment cannot harm, no matter how frequently or persistently employed. On the other hand, such treatment is decidedly beneficial also in improving digestion and nutrition.

In spite of every effort to the contrary, some cases, especially in older infants, require medication with carminatives. In such the standard teas frequently prove too weak. Resort must be had to more concentrated remedies.

The formula of paregoric with opium excluded makes a remedy of considerable value. The dose is easily regulated, beginning with a few drops, to the requirements of the case.

Rotch recommends that carminatives be administered with alkalies between feedings to counteract the high degree of acidity of the stomach always present, especially in bottle-fed infants. The following is one of his favorite prescriptions:

℞ Sodii bicarb.... .....40 grs.
Spts. Ammon. Arom.... .....40 m.
Glycerini..... .....30 m.
Aqua Menth pip. q. s ad..... 2 oz.
Sig: One teaspoonful between feedings.

When acidity is not an element requiring special treatment lac asafetida is frequently of value.

In concluding, it may be remarked that the use of narcotics in the treatment of infantile colic is only exceptionally justifiable.

DISCUSSION.

DR. WILLIAM E. DARNALL, of Atlantic City.—I think every physician understands what infantile colic is, but one often meets with difficulty in relieving it. It is usually merely functional, but it may be a symptom of a very grave disorder; hence the necessity

for careful differential diagnosis. The wise old ladies tell us, and it seems to be borne out by experience, that boys are more subject to colic than girls. The cause I do not know. As a rule there is an accumulation of gas in the bowel and stomach, which produces increased or spasmodic peristalsis. The cause may lie in the infant or in the mother. It should be borne in mind that a child which has been nourished *in utero* for nine months often has weak and undeveloped digestive organs, and as a result, these organs cannot always stand the sudden strain thrown upon them when it is born into entirely new and different environments. A point of importance, which I think has not been mentioned, is the influence of the pancreas. We know that the pancreatic juice is of great importance in digesting the albuminoids, and we also know that the pancreas is not matured until the end of the first year. It is easy to understand, therefore, why digestion of these substances is often deficient, and as a result, colic ensues. The reader of the paper has well brought out the causes which lie in the mother. Among these causes are various laxatives and purgative drugs taken by the mother. Perhaps it does not produce the same colic, but does produce increased and painful peristalsis. The effect of worry, anger and the general mental state of the nursing mother have been referred to. That wonderful observer, Dewees, noticed that an attack of pain may produce an attack of colic in the infant. He noticed that a child suffered persistently for a long time with colic, and that during this time the mother was suffering severely from toothache. On removing the offending tooth her pain and the infant's colic both ceased. The most common form of colic is that due to the food. The composition of the food may be correct, and yet the infant may be given too great a quantity of the food. As a rule, however, the percentage of the proteids is too large, although sometimes the colic is due to too much sugar. With underfed nurslings we meet with increased peristalsis very often. The child constantly tugs at the breast, and the increased peristalsis becomes painful. The influence of cold in connection with such infantile disorders is potent. If a child is allowed to lie too long in a wet diaper, its body may become chilled and colic result. Dr. Illoway, of New York, lays great stress upon the play of the features in diagnosticating infantile colic of functional nature. In the more serious disorders in which colic is a symptom, the child does not draw up its limbs against the abdomen as he does in the ordinary

simple functional form. The author's statement regarding the value of heat in the treatment of colic is worthy of emphasis. These children should not be given opiates or narcotics of any kind except in those rare cases when nothing else succeeds.

DR. JOHN C. JOHNSON, of Blairstown.—I would refer to the existence of a small umbilical hernia as a cause of infantile colic, a cause which is not uncommon, and yet has not been mentioned so far in this discussion.

THE ALEXANDER OPERATION IN THE TREATMENT OF RETRO-DISPLACEMENT OF THE UTERUS.

BY F. M. DONAHUE, NEW BRUNSWICK.

In speaking of the Alexander operation in the treatment of retro-displacements of the uterus, I do not wish to say that it will prove a cure-all for every backward displacement, for there are many conditions in which displacement backward occurs, and for which the operation should not be undertaken with any hope of giving relief. In fibroid tumors of the posterior wall of the uterus, that portion often becomes bent, and retro-flexation of the uterus takes place; there it would be manifestly unfair to expect an Alexander operation to do any good at all, and so, in the same sense, are fibroids of the anterior wall of the uterus which, by their growth and the pressure they exert, produce a retro-version of the uterus. These fibroids and the displacements which they produce, should have some other form of treatment than the operation of which I speak.

In retro-displacements with adhesion of the fundus uteri to the rectum or to the peritoneum in Douglas's pouch; these conditions are usually the result of a pelvic peritonitis, set up by a septic endometritis which extends through the tubes to the pelvic peritoneum or through the lymphatics of the uterus to the broad ligaments and so to the pelvic peritoneum and the uterus is bound down. It cannot be lifted up in the position of anteversion, or if lifted in this position, remains so only a few minutes, to sink back again as soon as the force applied is removed. This condition requires a different procedure, which will be mentioned later on.

In disease of the tubes and ovaries when the tubes contain pus,

blood, or serum, or when the ovaries are cystic and enlarged; with these conditions there is frequently a backward displacement of the uterus. Here the Alexander operation is particularly contra-vindicated, for you cannot treat the disease of the adnexa by an Alexander operation, and it is this disease which requires treatment, and not the displacement. The one essential for a good result after an Alexander operation, is that the uterus shall be freely movable and that the tubes and ovaries shall be healthy.

In many cases there will be associated with the displacement an endometritis due to the long continued displacement, producing a congestion of the uterus so leading to this condition. Here a dilatation of the uterus and a currettage should be done first and the Alexander operation immediately afterwards.

In my student days under the late Prof. Munde, the treatment of retro-version of the uterus was entirely by pessaries. If the uterus could be replaced and stayed in place, a pessary was introduced and the woman was allowed to go, to return once a month, or once in two months, to have the pessary removed, cleansed and replaced. So these poor sufferers were a constant source of annoyance and sometimes of an income to the practitioner. If the uterus was adherent, the Thure Brandt method was tried, followed by applications of iodine to the vault of the vagina and the introduction of boro-glyceride tampons, to be renewed once or twice a week according to the indications. These patients were seldom cured; they would go from one physician to another to have only the same treatment applied.

Dr. Alexander devised the operation which bears his name and which forms the title of this paper. It consists of shortening the round ligaments by an incision through the anterior abdominal wall down to the external ring. The aponeurosis is divided, the ligament seized as it emerges from the external ring, pulled out till the fundus is against the symphysis pubes and then stitched to the pillars of the external abdominal ring.

Wylie opened the abdominal cavity and shortened the ligaments within the abdomen. Kelley opened the abdomen and stitched the fundus uteri to the peritoneum of the anterior abdominal wall. Mackenrodt does a shortening of the round ligaments through the vagina, while Gillian opens the abdomen, perforates the sheath of the rectus abdominis muscle and stitches the round ligament in this

position. While all these operations have their advantages, the one great disadvantage which they have as compared to the Alexander operation, is that you must open the peritoneal cavity for their performance, and no matter how careful we may be of our asepsis, occasionally we get a septic infection with all of its dire consequences. The operation of Wylie is good if you have conditions which require you to open the peritoneal cavity. After dealing with adhesions, or tubal, or ovarian disease, the round ligaments are seized on either side with an artery forceps and pulled up, they form a triangle; the apex, in the grasp of the forceps, the base at the broad ligaments; with a straight needle and catgut the two legs are sewed together and the round ligaments are shortened in proportion to the extent of the pull.

Kelly opens the abdomen, lifts up the uterus, puts in two stitches in the peritoneum of the anterior abdominal wall and through the fundus, behind the attachments of the broad ligaments.

Mackenrodt makes two small incisions on each side of the cervix uteri in the vagina, grasps the round ligaments, pulls them down into the vagina and stitches them with catgut. While Gilliam opens the abdomen, frees the uterus, perforates the sheath of the rectus muscle, draws the round ligaments through the perforations and stitches them there.

The one objection to the Kelley operation, or to any operation which fixes the uterus to the anterior abdominal wall is, in the words of Prof. Polk, "You make one lesion to cure another."

The fixation of the uterus to the abdominal wall begets congestion and congestion begets endo-metritis.

Another point: If the woman be of child-bearing age and married, pregnancy may occur. If she does not miscarry, there may be considerable difficulty in delivering the child, Cæsarian section having been resorted to in a number of instances to effect delivery. In cases where the uterus is adherent, and where there is no disease of the tubes and ovaries, I have adopted the method of Professor Polk, in making a vaginal incision in Douglas's pouch, breaking up the adhesions with one finger, putting a stitch or two in the vaginal incision, and then completing the procedure by an Alexander operation.

To do an Alexander operation properly the following procedure is adopted: The uterus is first determined to be movable, and that there is no disease of the tubes or ovaries. The vagina is scrubbed

with hot water and soap, then washed with bichloride solution and, finally, alcohol. The abdomen is scrubbed and shaved, as in the preparation for a laparotomy. If there is an endo-metritis the uterus is first dilated and curetted. This is done with bare hands. Rubber gloves are now put on and the Alexander operation is done by making an incision parallel with Poupart's ligament and about one inch above it. The tissues are divided down to the fascia of the abdominal muscles. This exposes the external abdominal ring.

The aponeurosis covering the external ring is next picked up between artery forceps and divided, when the ligaments may be seen. It is pulled out, stripping the peritoneum from off it as it emerges. It is now stitched with silk-worm gut sutures, using a figure of eight suture, and stitched to the pillars of the ring, and then an antiseptic dressing is applied. The first dressing is done about the fifth day, when, if everything is doing well, a second dressing may be applied, which is allowed to remain until the twelfth day, when the stitches are removed.

The woman is allowed to sit up on the fourteenth day and to go about gradually from then on. A pessary is always inserted to be worn for two or three months, until the ligaments are firmly bound in their new position. In forty cases in which the writer has done this operation, all but ten have been heard from. They are all well anatomically and symptomatically. Of these forty cases twenty-five were in married woman. Six of these, or about 25 per cent., have been pregnant after from two to seven years of sterility, and have been delivered of full-term children without recurrence of the displacement. Two were widows, and thirteen were in the unmarried class.

These, gentlemen, are my views in regard to a procedure which, in carefully selected cases, is capable of effecting a cure in a very troublesome class of cases and without any mortality.

RETRO-DISPLACEMENTS OF THE UTERUS AND THEIR TREATMENT.

BY J. M. BALDY, M. D., OF PHILADELPHIA, PA.

There was a time when ascites was described as a disease and was generally accepted as such. Now we all know it to be but the *indication* of some disease (such as liver, heart, kidney or peritoneum, etc.), and it would be a bold man who would venture to describe ascites as a distinct disease.

So it is with retro-displacements of the uterus. Gynecology roved in the uncertainties of development for many long years, and although we are now almost at the finish, we still have a few legacies of the "dark ages." Retro-displacements are notably one of these legacies. But the time will come when men will be just as much ashamed to speak and write of them as a distinct disease as they are at present of ascites.

All rules have exceptions which in no way vitiate the truth of the rule; and so it is with retro-displacements. There are a few cases where it seems as though the displacement was the only thing which would explain the symptoms and a replacement of the womb cures the case. These cases are the great exception, however, and in no way shakes our faith in the rule. In fact, many of these apparent exceptions have other possible, if far-fetched, explanations.

The rule is this, viz: Retro-displacements of the uterus are mostly coincident with other lesions, and where such is the case, the symptoms almost universally come from the associated disease.

Any number of cases of displacement are reported, and volumes are written on the subject—men continually tell me of innumerable cases they have in their practice, etc., etc., but, to be perfectly frank, the fault is not with the condition, but mostly with the lack of accuracy in the diagnosis of the practitioner. I say this in a spirit of charity, not of wanton criticism; it is true in either case. When a practitioner of medicine has a case of retro-displacement of the uterus, together with a prolapse of the ovaries, which ovaries are possibly adherent, or, at least, schirrotic, and he only sees the displacement of the womb and believes that this creates the symptoms, why should he complain if I suggest that his diagnostic powers are a bit undeveloped; and this in spite of the fact that a replacement of the pelvic organs by a pessary or an operation may have relieved the symptoms. He has simply stumbled on a cure in that individual case without a true appreciation of the pathological condition present; but where he has stumbled upon a cure in this one case, he will probably fail to even obtain relief in the next half-dozen or so.

The most common disease with which displacements of the uterus are associated (and which, in fact, often causes the displacement) is inflammatory disease of the pelvis. Child-bearing, neoplasms and traumatisms cause the bulk of the remainder.

A retro-displacement of the uterus, even with prolapse of the

ovaries, may exist for years without producing a symptom disagreeable to the woman. Eventually, it is true, many of them give rise to troubles. Given a young woman with such a condition, free from symptoms for years (and this often occurs), matrimony intervenes, and within from three months to a year sexual life causes sufficient irritation to those ovaries to send the woman to a doctor—mark you, I say *ovaries*, not uterus. If the ovaries were out of the way and uninvolved the uterus itself would give little or no trouble. Even when the fundus becomes tender, as is so often the case, it is almost always due to the reflex irritation from the tender ovaries or to the direct adhesions of the fundus itself. A displaced uterus, which even in a married woman is giving no trouble, will, if a puerperal septic attack or a gonorrhœal infection supervenes, becomes at once troublesome. More so is this true than it is of a set of organs in an upright position. But who will venture to contend that in any of these cases it is the displaced uterus which is the disease and not the new factor which has entered into the case.

The more I see of gynecological practice, the fewer unexplained cases of apparent trouble from retro-displacements come under observation and the more am I inclined to limit the list of exceptions. In too many cases where I had at my examination (even with the patient under the influence of an anæsthetic) thought that I had a simple case of displacement with no complication, have I found myself mistaken at a subsequent operation in which the abdomen was opened and the parts directly inspected, to place very much reliance on men's diagnosis as regards adhesions and minute lesions of the appendages when they have had no subsequent opportunity of seeing in that pelvis. "The treatment of retro-displacements" is, then, a misnomer; it should be, "the treatment of conditions in which retro-displacements occur as an incident." In most of these cases the displacement of the womb itself can be ignored and the result be perfectly satisfactory, as years of abdominal surgery have taught. A discussion of these conditions would mean a discussion of the treatment of almost all the pelvic ailments of women. Suffice it to say, that each disease found, be it the result of puerperal septicæmia, gonorrhœal infection, schirrotic disease of the appendages, neoplasms, adhesions, or anything else, is to be treated on the proper line of treatment for that disease, whichever may obtain.

In those few cases in which no disease can be found, and again, in

those cases where the disease found has been dealt with by the appropriate treatment, and it is in addition decided desirable to bring a retro-displaced fundus forward (for instance, where the peritoneum of the pelvic walls back of the womb and broad ligaments are denuded and bleeding, and where adhesions between them and the fundus would occur if they were allowed to come again in contact, or where it is desirable to draw up prolapsed ovaries, etc., etc.), there is a choice of methods, to which I may be permitted to call your attention.

Some of us have seen the day when the clamp was used in the treatment of the stump in the removal of ovarian tumors; the ligature took its place and the clamp passed into history as a necessary and interesting step in the development of the completed and simple operation of to-day. The same thing took place in the evolution of hysterectomy for fibroid tumors of the womb and other conditions. The same transition is now taking place in the surgical treatment of cases complicated with retro-displacements of the uterus. A short while yet and Alexander's operation, hysterorrhaphy, ventro-suspension and similar operations will have become history. The results of some of these primarily are uncertain, and the operations must be done in the uncertainty of diagnosis, notably in Alexander's operation. In the balance of these subsequent complications and distochias in subsequent pregnancies have been so many and serious, that men have in ever-increasing numbers been driven to search for something which would prove a safe and final substitute. This has, I believe, been found in operations on the round ligament, intra-abdominal. Theoretically, these operations fulfill all the indications desired. They open the way to a thorough inspection of the parts and to an intelligent application of the proper treatment to any complication existing. They do not weaken any of the already weak canals of the body (the inguinal canals). There is no chance of failure of the operation, such as tearing the ligaments or failing to bring them out, as happens in the best of hands with Alexander's operation. They cause no unnatural attachment and no adhesions which can possibly give subsequent trouble. They leave the uterus a pelvic organ, and do not draw it up into the abdomen. They bring the womb into a perfect anterior position, holds it there accurately and with certainty, and at the same time leaves it freely movable. The only objection I can see which can be advanced against them is the danger of opening the abdomen. With any one who sees this as a serious danger or

objection, under the circumstances. I do not care to discuss the subject; I simply have no faith in his surgical judgment and skill.

The number of this class of operations, all based on the same principle, but differing in details, is large. Many of them are good, but some are more simple than others. The one I practice myself is as follows:

When the abdomen is opened, adhesions freed, if any, and the uterus brought forward; a pair of forceps is forced through the broad ligaments on each side of the uterus at a point near the uterus. The forceps penetrate from the posterior surface of the broad ligament and come out on the anterior or bladder surface, just under the round ligament, half an inch from its uterine attachment. The round ligaments are now pushed into the bit of the forceps and the forceps are drawn back, bringing the round ligament with them through the holes. The ligaments are then brought together forming a loop behind the uterus. A silk stitch now binds the round ligaments together and the forceps are removed. The uterus is now held well forward by the finger of the assistant, while the operator forces the round-ligament (with a pair of tissue forceps), as low on the posterior part of the uterus as he desires, and stitches them to the peritoneum of the uterus, at this point, with fine silk. This is about at the internal os, or lower. The result is a sling back of and around the uterus which holds it in perfect position, leaves it movable and does not lift it out of the pelvis. In addition, this procedure does what none of the other operations of any kind does; it twists the tops of the broad ligament forward in such a way as to lift the prolapsed ovaries up even as high as the ileo-pectoneal line, giving them perfect suspension, without in any way interfering with the calibre of the fallopian tubes.

If the round-ligaments are too short to be brought back in this way (they come back doubled on themselves), I cut them off near their uterine attachment, and after tying the blood vessels, bring the free ends back and attach them as a loop, or if still too short for this, I stitch the end of each round ligament onto the posterior surface of the uterus at such a point as to give the support desired.

The question of the use of pessaries I shall not discuss; their utility is so limited that even where they do apparent good, it is so questionable, that it is almost time wasted. This I will say, that in the vast majority of cases in which they will relieve unpleasant

symptoms, a tampon will do quite as well, and is much safer. The two classes of cases in which relief is experienced by their use are chronic pelvic inflammatory troubles (where they are a positive element of danger), and in cases of retro-displacement with prolapse and disease of the ovaries. A few of these cases are relieved through the use of a pessary, by lifting up the vaginal vault and relieving the general weight and drag. The great majority of even this class of cases will not tolerate the presence of the instrument, so painful is it. In my experience the vast majority of women who come to me for consultation, in whose vagina I find a pessary, have perfectly normal pelvic organs, in such condition and position as to make it perfectly plain that they had never been displaced. These women are usually suffering from gastro-intestinal disturbances or from neurasthenia, or from both. This state of affairs is the result of the teaching of the past; is it not time that those of you who know better take an emphatic and unequivocal stand in the matter? Balance all possible good from the use of pessaries with the harm, and there can be no question but that it would be better for women if the profession could forget there was such a thing as a pessary.

DISCUSSION.

DR. MORTIMER LAMPSON, of Jersey City.—I am in a somewhat embarrassing position, being called upon to discuss a paper which is essentially gynecological, while I am a general surgeon. I am not in exactly the same position as the late Dr. Abernethy who, when he sprained his ankle, called in a certain professor of obstetrics. A friend remonstrated with him for having called an obstetrician, to which Abernethy replied that he thought it was proper enough, for he had certainly had a miscarriage. The author of the last paper expressed exactly my ideas of the Alexander operation. As I understand the subject, the Alexander operation is based on wrong anatomical conditions and is essentially wrong in its conception. In looking at the round-ligaments, a yachtsman would notice the resemblance to the backstay of a yacht. If the round ligament were a backstay, or a frontstay, it would have been constructed more like the utero-sacral ligaments. Anatomically, it contains erectile tissues and other tissues which are very far from being designed to give firm support. Why Alexander should have selected this ligament for pulling the uterus forward, I cannot understand. My experience with the Alexander operation has been limited to a very few

cases, although I have seen the operation frequently performed, and I have noted that many such operators failed very much like a mountaineer called in a celebrated trial in Virginia. He was called to testify in the case, and the prosecuting attorney asked him his name. He answered "Jim Jones," and that he lived "over in the mountain." "Now sir," said the attorney, "were you present at Harper's Ferry on the nineteenth of February?" Jones by that time had become very much frightened, and he said: "I don't know Harper or where he keeps his cursed ferry." I may add that the surgeons whom I have seen essay the Alexander operation, have failed very much like this man Jones. I recall one case in which the surgeon fished for one hour for the round ligament, and finally gave up the search, concluding the operation by opening the abdomen and making an anterior suspension. The operation of Kelly is the better, if one feels that any modification of the Alexander operation is desirable. I have done ventral suspension several times after having failed with the Alexander operation.

DR. EMERY MARVEL, of Atlantic City.—I am very glad that the authors of these two papers have taken the position that the treatment of retro-displacements is operative, and that they do not advise the use of such supports as pessaries. I am especially pleased with the position taken by Dr. Baldy. The operations which utilize the normal structures for the support of the uterus are those which make use of the round ligament, such as Alexander's operation, Mann's operation, Wylie's operation and Dudley's operation. There are two or three objections, it seems to me, to the Alexander operation. The one advanced by Dr. Baldy is that the operator works in the dark and certain complications may be overlooked, and hence not corrected. It is very true, as has been said, that there are often tubal or ovarian complications, or adhesions, and these must be relieved before a complete cure can be affected. The objection made to the other operations, that the peritoneal cavity is opened, does not seem to me to have much weight. Another objection is the risk of hernia, but with the Alexander operation there are two possibilities of causing hernia, whereas by median incision there is only one such possibility. Bové has utilized the utero-sacral ligament in pulling the cervix uteri back. Of those operations which utilize the abnormal structures, ventral suspension is perhaps the one most performed, and it certainly has done much good. Dystocia

is probably the greatest objection. I have recently attended such a woman in confinement, and her labor was much easier than those occurring before the operation. The operation of excising the round ligaments, making a window through the broad ligament, and passing the round ligaments posterior to the uterus and making a sling, seems to be a promising procedure. I had the pleasure of seeing this operation done by Dr. Baldy, and while I was favorably impressed with it, it has occurred to me that there is an objection to it. We should retain all of the support that the uterus had originally. If we cut the round ligament, we certainly weaken that support, and if we pass it posteriorly, we must depend upon the strong adhesions which we secure on the posterior surface of the uterus. It is possible that these adhesions will not be secured, and in such an event, the operation not only fails, but the original support is weakened. Recently, Dr. Byford has described, what seems to me, a perfect operation for retaining the uterus in a normal position. He utilizes the round ligaments. A fold is made in the round ligament and the end of fold is brought to the upper surface of the internal inguinal ring and fastened there. In so doing, not only shortening the round ligament, but duplicating its supporting function.

DR. PHILANDER A. HARRIS, of Paterson.—I am very glad that Dr. Baldy has came to us and presented a paper which has covered the more important points on retro-deviation of the uterus. By the reading of his valuable paper, he has conferred a benefit upon all those who believe what he has said. Those who do not, will have a certain time in which to get right on this subject. Dr. Baldy has told us in polite terms that simple retro-version of the uterus is a comparatively symptomless disease. He has pointed out the various diseases in the pelvis, which have caused the symptoms so generally attributed to retro-deviations of the uterus. I think that any doubting ones cannot do better than read this paper over and over again, until they have correct and settled ideas on the subject. I believe he has spoken the full truth to us, and has rendered the profession a great service by again pointing out the many associated diseased conditions which are responsible for the symptoms, which in times past, we were accustomed to attribute to simple retro-displacements.

I cannot ask you to adopt Dr. Baldy's operation, because I have had no experience with it. I was especially discouraged from continuing to endorse the Alexander operation, because of the remarks

made in the New York Academy of Medicine by the younger men of New York, who have found in their dispensaries, many cases of hernia following that operation. Such a class of observers know almost more about the failures of gynecology, than do the operators themselves.

The previous speaker has very justly said, that the central incision presents rather less liability to hernia, than inguinal incisions and that it possesses the additional advantage of reducing by one-half, the total number of abdominal sections for retro-displacements.

With regard to pessaries, I would say that they occasionally do good for retro-displacements of the uterus, where there is no other pathology.

DR. C. P. NOBLE, of Philadelphia.—Very much has been said by Dr. Baldy that cannot help but receive the support of those who have had much to do with these cases. He put many valuable truths in very strong terms. I believe there are many cases of uncomplicated retroversions that do produce symptoms, and I believe many of those cases soon become complicated by prolapse of the ovaries; whereas, if the case had been cured before this time, prolapse of the ovaries would not have occurred. I sharply separate the uncomplicated from the complicated cases of retroversion. I cure the uncomplicated cases by the Alexander operation. In the complicated cases the chief complications are inflammatory diseases of the appendages and prolapse and congestion of the ovaries. I have found no difficulty in curing the uncomplicated cases by means of the Alexander operation. One speaker has said that the Alexander operation is unphilosophical, but it should be remembered that the round ligament acts by tilting the uterus forward, and then it is kept in position by the intra-abdominal pressure, thus converting this ordinarily destructive factor into a conservative factor. I have done the Alexander operation over two hundred times. As my experience has increased I have been more and more impressed with the value of the operation. I have never known a hernia to follow an Alexander operation, so that I do not think many such herniæ occur if the operation is done properly; *i. e.*, if it is finished with a Bassini operation. In complicated cases, those in which there is disease of the appendages, the Alexander operation is, of course, contra-indicated. It has not been my experience that in cases in which the Alexander operation has been done there has been any difficulty arising from overlooking disease of the appendages.

Where the retroversion is merely an incident to disease of the appendages, of course one should operate upon the appendages. Where this becomes necessary, I think it is far better to remove the uterus also.

DR. E. J. ILL, of Newark,—I am very glad to hear Dr. Noble speak as he does, for I am very sure that extreme opinions are apt to be erroneons. The first speaker told us that the Alexander operation was a foolish operation, and he admits he has done the operation only two or three times, and saw it done by an inexperienced operator another time. He really knows nothing about it. If you desire to know about the operation, ask Dr. Noble, or see such men as Drs. Polk and Ediboles, of New York, or, pehaps, Dr. Goldspohn, of Chicago. The latter gentleman is, perhaps, the best authority in the country. He not only does the operation, but resects tubes and separates adhesions of the uterus, and has repeatedly published his results—results that are not impressions, but carefully recorded cases—cases that have been followed up for months and years. It is such work as his that needs our careful perusal.

The pathology of the retroflexed uterus is an important matter. We are told that the disease of the appendages is primary and the uterine disease secondary. This holds good only in a limited number of cases. In a majority of cases I prefer to say that the uterus has fallen down, and, as a result, there has developed an induration of the stroma of the ovary.

The reader of the paper tells us of a newly devised operation, which has the fault of many others, *i. e.*, that the uterus is suspended by the weakest portion of the round ligament, *i. e.*, the distal end.

We have been told that pessaries are things of the past, but this is not so, and I should say that nine-tenths of the men present here who work at all in this line, and are not operators, obtain a great deal of benefit for their patients from such treatment. It is not at all necessary to operate in every case, and I do not believe any one who knows me will say that I am afraid to operate. We have heard a good deal of talk, but we have not been presented with figures; it has been simply a matter of "impression."

DR. BALDY.—It has been said that figures talk, but I would say that nothing lies so much as figures. I am astonished at Dr. Ill's criticism. He is inconsistent, as he himself criticises my operation, and yet he has not done it at all. Consistency is a jewel! I do not know of

a more absurd statement than that because one has gone on doing wrong, one has more sense than a person who has done an operation and has discarded it as worthless. Herniæ have frequently occurred from Alexander's operation, and authorities in New York City have placed on record between forty and sixty cases, and I have never heard these cases disputed. It is better to let retro-displacements alone than to produce one or two herniæ. The mere mention of Goldspohn's name upholds all that I have said on diagnosis. Goldspohn opens the rings into the abdominal cavity, and goes down into the pelvis and treats disease on both sides. His operation is entirely different than Alexander's, and violates every principle of Alexander's, and is consequently far superior. His work is very valuable; but why make the double opening when one opening in the median line will do. I admire Dr. Noble's ability to treat these cases without overlooking complications. I have struggled for years to do so, but I have been unable to reach the point which Dr. Noble claims he has reached. I know, however, that the only cases Dr. Noble was sure of were those in which he opened the abdomen.

MOSQUITOES AND MALARIA.

BY J. J. KINYOUN, M. D., PH. D., GLENOLDEN, PA.

The only excuse the writer can offer for this brief paper is that now since malaria has become a household word, and has also become, as it were, safe refuge for many of us when in doubt, it will not be amiss to note the progress which has been made in the etiology of this disease, and in particular to the role which the mosquito plays in the transmission from person to person.

It is now a little over two decades ago since Laveran described the parasite, and since then our knowledge regarding its behavior and life history was added to little by little. However, as valuable as these discoveries have been, little or no progress was made in determining just how and in what manner this parasite gained entrance into the body and caused the train of symptoms which we ascribe to malaria.

Of the ten known species of hamamœba affecting vertebrates, only three* are classed as affecting man.

*Since the above was written, a hamatozoan has been described as being the cause of spotted or mountain fever, and a mycoid body in certain cases of remittent fever.

Laveran believed the malarial parasite to be one species, while Golgi asserts that these are at least two, if not three or more; Celli recognizes three—the benign quartan and tertian, the malignant tertian or æstivo autumnal; while Manson describes five—quartan, tertian (benign forms which do not form crescents), the quotidian pigmented, quotidian unpigmented, the tertian—all malignant for crescents.

The plurality of species of the organism is further confirmed by Mannaberg's experiments, in which he inoculated thirty-three persons with blood from cases suffering from malarial fever, and produced in every instance the same type of the organism as were found in the blood of the original cases.

The inoculations made by Bignami and Grassi with blood of a patient containing the tertian parasite also confirms this view. The experiment conducted by Sambon and Low is perhaps of greater importance than any of the above cited. These gentlemen, while at Ostia, fed mosquitoes on the blood of a case infected with the benign tertian parasite and sent these to England, where Doctor Thorbourne Manson submitted himself to be bitten by these mosquitoes, and five days afterwards came down with an attack of the tertian fever.

In regard to the plurality of species, the writer has believed for many years that the contention of Laveran and others was incorrect, and based this belief on the observation of several hundred cases of malarial infections, treated at the Marine Hospital at New York in 1889 to 1890. In the study of the bloods of cases the morphology and development of the parasite was such as to suggest that there were two, if not three, species, the tertian, æstivo-autumnal, and another unclassified, now recognized as the quartan. While our views were convincing to ourselves, and not to others, they were not given more publicity than the occasion required.

Various theories from time to time have been advanced to explain how malaria was contracted. Among the oldest is that the mosquito is one of the agencies of transmitting it to man. In olden times it was held by several authors that malaria could be transmitted by the stings of insects. Varro described the mode of infection by inhaling or swallowing a small animal which grew in the marshes. But it was usually regarded as a miasm, as the name indicates.

There were also popular beliefs regarding the mosquito being causative of malaria. The natives of East Africa have long asserted that it was caused by its sting; in fact, their name for malaria was

"mbu," the same as for mosquito (Koch). The natives of certain districts of India, where malarial diseases prevail, always slept with the whole of their bodies and heads covered to ward off malaria.

"The peasants of the Agro Romano always fumigated their cabins before occupying them, for the purpose of driving out the mosquitoes, believing that if they did not they would contract malaria" (Celli).

In this country the belief is held "that to go out after sundown one is almost sure to catch the chills." Nott, in 1848, speaks as if the mosquito theory was an accepted fact. To King (1883) belongs greater credit than to any other for the mosquito theory and his arguments therefor. Then follows other theorists, Lavaran and Flugge, 1891, Koch, 1892, Manson, 1894, Mendini, 1896, who drew an analogy between the mosquito in its relation to Filgaria sanguins hominis, and the possibility of malaria being contracted in the same way. The most important of all are the facts adduced by Ross, 1898, by which he demonstated that bird malaria was infectible through and by the mosquito.

Ross's researches on the proteosoma infection of birds were of such as to suggest the mosquito being the agent in transmitting human malaria. In order for a better understanding of the importance of Ross's discoveries, it may be well to refer to these a little more in detail. In 1898 he took 245 gray mosquitoes (Genus culex); which were allowed to feed on birds which were infected with proteosoma. 178, or 72 per cent., consequently contained certain pigmented cells in their stomach walls. 249 other mosquitoes, used as a control to the above, were fed on men infested with æstivo-autumnal parasites (crescents) on immature tertian, on birds with halteridum infection, and on healthy sparrows. All were negative. But 81 mosquitoes fed on mature proteosoma, 76 showed pigmented cells.

His further observations were that these pigmented cells, after being lodged in the muscular walls of the mosquito's stomach, became nucleated, began to enlarge to three or four times its size, and after a lapse of from six to eight days these nucleated bodies became further subdivided into "germinal rods" when the corpuscles burst outwards, setting free the rods, which were taken up by the body fluids, and finally were found in the salivary gland. Birds bitten by mosquitoes after a lapse of from six to eight days (the time required for the parasite to complete its sexual development) they would almost invariably be infected.

Another interesting feature was by feeding a mosquito; on several occasions there would then be several crops of the organism developing in their various stages.

Many of the Ross experiments with regard to malaria, however, were negative, but he finally found a few mosquitoes belonging to a particular species (anopheles), which, after having been fed on malarial blood, there were observed, after four to five days, pigmented cells in the stomach wall which he had not observed in non-infected insects. After finding the proper mosquito it was then an easy matter to observe the development of the parasite through its various stages.

Grassi and Bignami who had been working on the same lines as Ross, determined the species of the mosquito prevalent in districts where malaria prevailed, succeeded after a second attempt in infecting persons through them.

MacCallum and Opie in 1897 and 1898, made researches on the proteosoma and Halterdium infection of birds, the latter, the æstivo-autumnal infection in man, and discovered that the parasites possessed two forms—one a pigmented cell which became flagellated soon after its removal from the body, within fifteen to twenty minutes, and another in which the pigment was distributed in a definite ring, not diffused. The flagellum concentrated its pigment at one end, dashed into one of the large granular pigmented spheres which seemed to throw out a pseudopodum to meet it, buried its head, finally wriggling its whole body into it. Soon thereafter the body became round and quescent. Here he was able to observe practically what occurs in sexual forms of the malarial parasites, when taken into the stomach of the mosquito.

His interpretation of these phenomena was that the two forms found in the blood of birds were the male and female elements, and this process was that of sexual conjugation. Following these observations, he examined human blood containing the æstivo-autumnal parasite, and was able in two instances to observe a conjugation of these bodies, which occurred within a few minutes after the blood was taken.

The question would then naturally suggest itself, whether conjugation of these male and female elements can or does take place under some circumstances in the human and bird species, and is not altogether dependent upon an intermediate host.

The malarial parasite, like the coccidia, requires a host to complete

its cycle of development, being parasitic to man, and to a certain genus of mosquito anopheles. It has two cycles, the asexual cycle (Golgi), endogenous, and the sexual cycle, exogenous (Ross). The endogenous mode of reproduction is one of spore formation and can be carried on for a period more or less long without the agency of the mosquito. The other, the exogenous, is a sexual process which can only be completed by the passage through a definitive hose, the mosquito. The endogenous cycle of the parasites is completed in from twenty-four to seventy-two hours, according to the class to which it belongs.

In general, if blood of a patient be examined shortly after, some of the red cells will contain small, actively motile amœbula, and at the end of twelve hours, these have increased considerably in size, often occupying as much as a third of the corpuscle. It now contains a few granules of pigment. At the end of twenty-four hours the amœboid movements are less active, gradually becoming less active, the pigment becoming more concentrated, the body now segments, (sporocytes), and it destroys the blood cell and is set free in the plasma. The time required for the sporulation is for the quotidian, twenty-four hours; tertian, forty-eight hours; æstivo-autumnal, forty-eight hours, and quartan, seventy-two hours.

The number of sporocytes formed in each segmenting are: tertian, fifteen to twenty-three, æstivo-autumnal five to twelve, quartan six to fourteen.

In addition to the sporozytes, the æstivo-autumnal form the well-known spheres and crescents after six to eight days, the large pigmented spheres in benign tertian in from one to two days. These two latter are the forms of parasites which seem necessary to complete the exogenous sexual cycle.

According to Sambon, the formation of the asexual spores during the swarming stage, is analogous to the products of zoospores in various protophytæ. The segmentation of the parasite is the result of the exhaustion of nutrition, the process being in all manner and purpose the same as parthogenesis in certain of the aphides. These insects may produce this by parthogenesis throughout the summer season, but at the beginning of the cold season, male and female develop, conjugate for the perpetuation of their existence through an egg which will withstand the rigors of the winter. This naturally raises the question whether conjugation of the male and female

elements of the malarial parasite take place within the body, and whether this does not occur under certain circumstances, as it is a well recognized fact that many cases of malarial infection terminate into recovery or a stage of latency, even when no anti-periodics are administered. The apparently recovered person may be subjected to another attack at weeks, or even months duration afterwards, when the blood, immediately after withdrawal, if examined, will contain both the male and female elements, that is to say, the flagellated and the large pigmented bodies. Under these circumstances, it is not an improbability that the parasite may complete its asexual cycle within the body.

Many anopheles, evidently do not transmit malaria, or may be capable of doing so under some circumstances and not under others. Ross contributes his failures, probably due to climatic conditions, although it must be said that the anopheles Rossii, which is the most numerous in some places, have not been able to be infected with the malarial parasite. Buchanan's observations on quartan ague by the bite of the anopheles are as follows:

"From the observations now on record, it would be inferred that it does not always follow that mosquitoes are easily infected, and that in many instances fails. This may be partly due to the mosquito in being in proper condition to receive the parasite, or more probable, the parasite is not in the proper stage of development for conjugation." Grassi believes that the sexual elements may undergo a parthogenesis and may not be in condition to furnish the male and female elements.

Further, he says there are persons whose blood does not allow the fertilizing forms to develop, and, therefore, are incapable of infecting the anopheles.

Liston (*Indian Medical Gazette*, April, 1902) summarizes the matter thus:

1. The man experimented on might be immune.
2. The anopheles did not bite at the time when the parasite was in a suitable condition.
3. The season was not one in which the quartan parasite could develop properly.
4. The species of anopheles used in the experiment was not the correct one.

When a young mosquito escapes from the egg, which floats upon

the surface, it is a worm-like larvæ. It swims, eats greedily, grows rapidly, shedding its skin several times until it has attained its full development of the pupa state, during which it ingests no food, but undergoes certain anatomical changes, just as we see in the chrysalis stage of other insects. The culex mosquito differs from the anopheles in the manner in which it deposits its eggs. These consist of from 200 to 250 eggs glued together in a boat-shape-like mass, whereas the anopheles eggs are deposited separately and are not adherent one to another. When examined with a lens the culex egg is seen to be rather long and narrow, more pointed at one end than at the other, and is attached to other eggs in its long axis—that is to say, the broader end of the egg lies next to the surface of the water. The anopheles egg appears as an oval body, hardly large enough to be detected by the naked eye. It is, like the culex egg, broader at one end than at the other. The egg, however, is not completely circular in its transverse section, one side being more rounded than the other. This allows the egg to float with the rounded side on the surface of the water, the more flattened or slightly concave surface being uppermost. The appearance somewhat resembles that of a boat, which occupies a little more than one-third of each side of the egg. The air cells act as a float to the egg. The larvæ escapes from the egg under favorable circumstances within two or three days.

Bruno and Galli-Valerio say that the larvæ of both the anopheles and culex may pass the winter in pools, even when covered with ice, but this is of rare occurrence. These larvæ are usually those of anopheles *punctopennis*, and those of *maculatus* do not survive. Dry eggs of both genus are not affected by freezing. (Grassi.)

With regard to a further discussion of the life history of the mosquito and the means of determination of genus and the several species, it would not only be long, but encroaching too much on the prerogative of the entomologists who are far more able to do the subject justice than the writer.

Only this general statement will be made relative to the breeding: The anopheles seems to prefer pools of fresh water, running streams, water in growing plants; whereas the culex will deposit her eggs on anything that contains sufficient moisture to hatch them.

The period of incubation in the several forms of fever, according to Caccini, states, for the tertian is from five to eighteen days, æstivo-autumnal five to nine days, malignant tertian five to nine days; the quartan has not been determined.

Latency.—Malarial infections may appear to have a period of latency for a few days, which may extend over many months. This latency may be to all intents and purposes the same as a symposis and may resemble the symbiosis of the parasite of Texas cattle fever. The exciting causes of malarial fever attacks may be fatigue, traumatism, sudden chill, foods causing gastro-intestinal irritations, medication, change of climate, intercurrent sickness, typhoid, dysentery, pneumonia, etc.

With regard to immunity to malarial infection, it is a question whether this actually exists in the same sense as we ascribe the state of resistance to other infectious diseases. There may be a limited number who are non-infectible. There may be, on the other hand, many who harbor the parasite without giving any clinical expression of its presence. It was an almost accepted fact that people living in a region where malaria is endemic became immune. This applied particularly to the natives of Africa living on its western coast. Here the adult population appeared not to suffer from malaria; many of the children, however, suffer with malarial infection in all its forms. The majority of these, however, are not attacked.

Koch's observations on both adults and children in East Africa showed that the majority were infected with the same species of parasite as was fatal to the Caucasian, yet with apparently no ill results. There must, therefore, be in a relative sense what is a clinical immunity but not actual. In fact, the same state appears to have been established in these races as in bovine malaria—a state of symbiosis, wherein the parasite can exist within the body for an indefinite time without disturbing its equilibrium.

Not long ago many prominent clinicians were inclined to believe that the so-called mixed infections were a misnomer, and that condition termed typho-malarial fever was purely typhoid fever. In all probability the majority of these cases so termed are typhoid fever, but there are cases encountered which are mixed infections—malaria and typhoid. The clinical symptoms sometimes resemble malaria and at other times those of typhoid.

If the writer may be pardoned for a slight digression from the title of this paper, he would refer to some cases of this character which were, it is believed, the first to be recorded.

Squier, in an article published in the *American Journal of Medical Science*, 1885, discussed at length this peculiar form of fever, and his

conclusions were that it was a distinct tpye of fever, and not one of a mixed infection, of typhoid and malaria. In the early part of April, 1890, I reported in the abstract of Sanitary Reports a preliminary note of what I termed "entero-malarial fever." Six cases of mixed infection were encountered in a series of examinations, over 100 of malarial cases, ten occurring during the latter part of 1899. * * *

"Connected with this series of malarial cases, several others of mixed infection have been encountered, a combination of malarial and enteric fevers, presenting clinically some deviations from the general course of either disease, and deemed of sufficient importance to record.

No difficulty has been encountered in establishing the source and time of malarial infection, but with regard to the enteric infection the difficulty has been great. Generally, however, the history was to the effect that the patient had remained ashore for some time previous to sailing to the malarial districts. This combination of these diseases has presented two sets of symptoms dividing the cases into two groups:

1st. Cases in which the symptoms of malarial fever predominate, masking the enteric symptoms.

2d. Cases in which the symptoms of enteric fever are more prominent.

In the first group (2 cases), at the onset of the attack the patients presented clinically all the symptoms of malarial fever, remittent, giving a clear history of the infection, the attack being characterized by a chill followed by fever and remissions, constipation and irritable stomach, etc., this chain of symptoms completely masking the graver trouble, so that suspicions are not aroused as to the true character of the malady until the patients were under observation for four or five days, or even longer. On admission, the blood of the patients was examined for the malarial organism, which being found in abundance, the cases were put in appropriate treatment. Æstivo-autumnal and tertian parasites.

A brief synopsis of the symptoms of one case will serve for both:

H. M., aet. 23. Was taken sick two days before admission, the attack commencing with a chill followed by fever, marked by a remission. On the day of his admission he had chilly sensations, then a rise in temperature followed by later remission. A careful physical examination revealed nothing abnormal except a slight tenderness of the

epigastric region, and a considerable enlargement of the spleen. The bowels were constipated. A microscopical examination of the blood was made, and a large number of the plasmodia malariæ, æstivo autumnal were found free, both in the serum and within the blood corpuscle. This established the diagnosis of malarial fever of the remittent type. On the fifth day after admission there appeared on his abdomen several suspicious-looking spots suggestive of enteric complication. On the day following, he had slight epistaxis and a tendency to diarrhœa, tenderness in the right iliac fossa. At this juncture, a bacteriological examination was made of the feces, and after several trials a bacillus answering to the description of that described by Eberth was isolated from the stools. An examination of the blood at this time demonstrated the presence of the malarial parasite, but in greatly diminished numbers. During the next week the enteric symptoms became so marked that without any microscopic examination there could be no doubt concerning the enteric fever. At this time the remissions had ceased and the temperature curve was characteristic.

In the second case (group 1), the symptoms were not so pronounced as in the first, but it did not differ from it on the whole. The plasmodium malariæ was found in the blood in abundance, and later the typhoid bacillus was isolated from the stools.

In the second group of cases (three in number), the enteric symptoms were well marked, giving a clear history of the disease. The patients had just returned from the South, where malaria was prevalent. The history gave the prodromal period lassitude, etc., followed by diarrhœa, epistaxis, and tympanites, and in one case slight hemorrhage. As a matter of routine the blood was examined for the parasite, which was found confined in the corpuscle, not free in the blood serum tertian. A bacteriological examination was made in each case, and the bacillus typhosus isolated from the spleen, thus establishing the co-existence of both factors in the disease.

In one of the cases, during the third week of the attack, when convalescence appeared to have been established, the temperature being normal and the appetite returned, he had a sudden elevation of temperature that rose to 39° and lasted about four hours. The cause of this was attributed to some indiscretion, a not an infrequent complication during convalescence from enteric fever. In twenty-fours after the first attack he had another similar in all respects, which suggested

that the probable cause was malarial. The blood was again examined and the plasmodium found to be present. A return to antiperiodic treatment for a few days, and then the case went on to speedy convalescence. The other cases of this group terminated fatally, one by peritonitis following perforation, and the other by pneumonia. The combination of the two causes appears to have produced a more adynamic form than has been observed in other cases with like symptoms occurring here during the past two years."

Prophylaxis.—There can be no reasonable doubt that the mosquito is the sole agent in distributing the malarial parasite, as well as the only means by which it completes its oxogenous cycle. The distribution of malaria goes hand in hand with that of the genus anophelidat, and without it there can be no malaria (Grassi). The existence of the mosquito may be denied by the natives, but there is no instance on record where it has not been found when looked for by competent persons.

As before referred to, the mosquito as intermediate host is harmless unless it has access to the parasite. Koch states that infected human beings he considered the starting point of new cases. Only a small number of mosquitoes can survive a winter. These must be re-infected in the spring. There have been a few advocates of the theory that malaria prevails endemically in some portions of the tropics, and is independent of the human species. Christopher's and Stephen's observations go to show that this is erroneous, particularly so with regard to the explorers in the jungles of Africa. They say that there are but few places where these are not always near the natives.

All mosquitoes, even after feeding on infected blood, are not able to transmit the parasite to man. Some anopheles are more easily infected than others. Some not at all. Frequently the parasite does not complete its sexual cycle in the mosquito because the gametes are either too young or too old, or even when all conditions are satisfied, its development may be arrested by meteorological conditions.

Anopheles, however, does not necessarily mean malaria any more so than the presence of stegomeia means yellow fever. Nutall has already pointed out this fact. Many districts in England are infected with anopheles, yet malaria does not prevail. The same has been observed in Italy, by Celli, where certain localities are infected with malaria, while in others contiguous thereto, anopheles being in abundance, are exempt. The same has been observed in a locality in

Northern Michigan, where anopholes have been found, having been exempt from malarial infection for years, became infected to a slight extent by a latent case among a gang of railroad laborers.

The distribution of the several forms of malaria, while dependent primarily upon the mosquito, is influenced very largely by climatic conditions, which may be in themselves sufficient to prevent the development of the parasite. The pernicious forms of malarial infection are not indigenous to the northern part of the United States, even in localities where the benign forms prevail. Many cases of the pernicious tropical malaria were imported into the United States during the late Spanish-American war, and from the Philippine Islands, and were distributed to nearly every State and Territory, yet notwithstanding there were no foci originating from any of these. It is, then, quite evident that climate must in some way have modified the parasite, either in its endogenous or exogenous cycle, that it could not be perpetuated. It is more than probable that the modification occurred in its endogenous cycle cause secondary cases of the benign tertian as occur in these places.

Shoo suggests as an explanation why certain districts are immune to malaria while others contiguous thereto may be infected, may rest on the natural food of the mosquito. His observations on malarial infection in Northern Holland, in 1902, was to the effect that be was unable to infect anopholes when these were fed on acid fruits, such as ripe tomatoes. It mattered not whether the insect was fed before or after infection; but if they were fed upon such as watermelons, sugar kept in plain water, they could with appromimate certainty be infected.

Celli makes a similar observation regarding the distribution of malaria in certain districts of Italy. Some districts are given up very largely to the cultivation of tomatoes. The persons living in such are free from malaria, whereas those living contiguous thereto, not cultivating these, are infected, the same species of anopheles being prevalent in both places. It has also been suggested that possibly the cultivation of the potato, the plant being quite acid, has some bearing upon the prevention of malaria in England. Before its cultivation became general, malaria prevailed in England quite extensively, and now it is extinct.

Many persons appear to be immune to malaria, and to all practical purposes they are so, if one is to judge simply by the clinical manifestations. It was believed at one time that the natives of Africa

were practically immune to malaria, and the negro was nearly so to yellow fever. Koch's researches on malaria on the coast of Africa show that this immunity is a relative one. He found the majority of the negro children were infected, and while the adults were not so much so, the children often had fever. Many were to all intents and purposes in good health. These parasites were of the same character as seen in the pernicious forms of fever occurring in the Caucasian.

These cases of apparent immunity are those which undoubtedly are the cause of perpetuating malarial infection in a given place, or for its distribution over wide and separate areas. The great influx of foreign population, much of which is drawn from southern Europe, where malaria is endemic, furnishes a large number of latent infection, and has, no doubt, been the means of establishing new foci as well as increasing the infection in places where it had formerly prevailed to a slight extent.

The management of these latent cases is perhaps one of the most difficult problems with which we have to deal in eradicating malaria. In the first place, the majority of such cases never come under the control of the physician, only when there is a sharp clinical expression of the disease. Many know its symptoms so well, that after taking a few doses of quinine, they resume their avocations and resort again to this self-treatment on another attack. Many others so affected pursue the same course, after consulting a physician and do not persist in a prescribed course of treatment, sufficiently long to remove the parasites. On the other hand, many physicians do not persist on a course of treatment which would accomplish this, but are content to meet these emergencies as they arise and would appear as indifferent as to the final termination of the same.

The efficacy of wholesale administration of the cinchona salts has been frequently proven for keeping the infection at a minimum. The daily administration of even a small quantity is sufficient for this purpose, but it does not always suffice to remove the parasites from the blood, nor prevent a reinfection. It has been a time honored custom of physicians living in the Southern States to administer quinine over a considerable period, and at intervals of about a week, commencing a few days after the cessation of the fever, that is to say, a full dose on the 7th, 14th, 21st and 28th days. This method has recently been advocated by none less than Koch. If such a plan could be adopted and made universal, it would not be long before

the mosquitoes would be freed from infection. Such a scheme, however, would fail in its object if we did not provide for the control of infected persons arriving from other places, or preventing the importation of infected places.

It would be next to impossible to maintain this statute because of the ever increasing and rapid intercourse between all sections of this country, without great difficulty and hardship. While popular sentiment would approve of measures to prevent the introduction of yellow fever from foreign countries, or in times of an epidemic here, from one place to another, it would not aquiesce to an anti-malarial measure, unless under some such guise. No radical measures, therefore, could be enforced at the present time, unless there was a complete change of popular sentiment regarding the gravity of malarial fevers. Quite a number of plans have been suggested for the eradication of malaria, the drainage of swamps, the cultivation and drainage of soil, changing the nature of the soil, planting certain trees and shrubs to abstract the mosquito therefrom, and personal prophylaxis (Celli).

Koch advocates personal prophylaxis as being the most important, while Ross believes in an anti-mosquito campaign and personal prophylaxis, *i. e.*, preventing the mosquitoes infecting persons and the isolation of the cases of malaria, so long as they are capable of transmitting the parasite to the mosquito. All these plans have to a more or less extent been put in execution, and have been of benefit. So far, however, none have entirely banished malaria. Draining swamps is the oldest plan on record. Empidocles in 460 B. C., drained the marshes around Agrgentum for this very purpose.

Quinine enjoys the distinction of being the universal remedy for the prevention, as well as the cure, for malaria. Other remedies have been advocated from time to time, but none have so far approached it in efficacy. Probably there may be discovered a better remedy now since the etiology of malaria is better understood, and the life history of the mosquito is attracting the attention of the scientific world.

The question as to whether susceptible persons can remain for a considerable time in a malarial locality without contracting the disease needs no further discussion other than to refer to certain experiments of the commission sent out by the School of Tropical Medicine, of Liverpool, and those of the Japanese Government. The commission repaired to Ostia, a place notorious for its fevers, and remained there

for over three months, during the time of the year when malaria fevers were the most prevalent. Its members observed no other precaution than guarding themselves against mosquito bites. All escaped infection. During this time others coming into this place, not being protected, nearly all these contracted malaria. The other instance is the experiment of the Japanese government with a regiment sent to Formosa in 1901, at the season when the fever prevailed. Two battalions were selected, one was protected against mosquitoes, and the other allowed to live under ordinary conditions of camp life. Observations were made on these two battalions for over five months. The protected battalion escaped from all forms of malarial infection, while the unprotected had 259 cases of fever.

The wonderful success achieved by the U. S. Army during its occupation of Havana has no parallel in sanitation. Its first efforts was to clean up the city and make it as clean as possible. It was only a short time until this was done, for it was a universal belief that the reason why yellow fever constantly prevailed in Havana, was due to its filth. Despite the most painstaking and thorough cleansing of the city, the military and sanitary authorities were grievously disappointed on the net results of this work. Yellow fever showed no diminution, but on the contrary had prevailed to a larger extent than before the occupation. Malarial fevers were also as frequent.

Just at this juncture, a commission headed by the late lamented Walter Reed, began its researches on the etiology of yellow fever. Soon after his wonderful discovery became known, that the stegomeia mosquito was the intermediate host of the cause of yellow fever, his recommendations were adopted and put into effect. The campaign was simply directed against the mosquito, sanitation being secondary. It was practically a war against the mosquito, both to prevent its breeding and preventing its biting cases of yellow fever. Within less than one year after this campaign had been instituted, yellow fever was eradicated from Havana. The result was, that not only yellow fever was eradicated, but the deaths from malarial fevers dropped down to almost nothing in comparison to what had existed in former years. Havana to-day, enjoys the distinction of having a death rate less than any other city of the tropics. The military rule of Cuba was, therefore, not only a political Godsend to the people of the island, but has been the means of demonstrating to the world how yellow fever epidemics can be effectually suppressed. The results

of Reed's and Carroll's investigations, and their practical application by the army almost exceeds belief. They read more like a romance than actual facts.

If now malarial infections could be dealt with in the same forceful manner as has been done with yellow fever, it would not be long before it would disappear. This does not seem impossible, because of its widespread distribution, and of its clinical manifestations. If malarial attacks were as fatal as those of yellow fever, and was regarded as a serious commerce disturber, probably more drastic measures would be taken against it, but so long as the great majority of cases are not fatal, there will be a disposition to temporize with it.

An anti-malarial campaign in a city is, comparatively speaking, less difficult than one in the country. In one the area is small, in the other of indefinite proportions. Whatever is done, is for the purpose of destroying the mosquito and preventing its breeding. This requires a large expenditure of money. Cities may be able to meet these expenses, but country districts cannot, unless largely aided by the State or National Governments. Any effective plan for eradicating malaria from a district of considerable area must, therefore, be considered as a public work. Many communities may possess the means of improving their sanitary condition by engineering the destruction of mosquitoes and the control of infected persons, but such instances will be few and far between when compared with the majority unable to do so. Even were it possible to rid malaria from a given place, it would be a long time before the danger of reinfection could be overcome. The rapid intercommunication between it and other places by sea and land is ever increasing, there is a constant shifting of the population, accessions to its population are constantly being made to these of immigrants from the malarial districts of Europe—many of these are infected—all these tend to perpetuate the parasite. And so far we have been unable to abolish the mosquito. We, therefore, naturally hesitate in advocating radical measures, nor can we hope for speedy success if we consider that an anti-malarial campaign must include fifty millions of our population and over a million and a half square miles of territory.

The control of malaria, that is to say, to reduce the number of infections to a minimum, will, perhaps, be accomplished within a generation. It will demand a constant agitation of the subject, an education of

the masses, and more in particular our legislators, before we can hope to accomplish what we desire. If the legislative bodies of State and Nation could be impressed with the importance of improving the health of our people, and make available for this purpose even a small amount of the sums annually expended in protecting the health of the live stock, we feel sure that before many years there would be a wonderful improvement in those districts now infested with malaria—a healthier people, an increased population, and more intelligent and energetic citizens.

We have as a nation been prodigal with our expenditures for developing our rivers and harbors, for promoting commerce. There has been expended on the Mississippi and Missouri rivers alone, not to speak of the smaller, enough money to have constructed them anew, and to-day they are practically useless. If only a few annual appropriations could be diverted from these, and be expended in the improvement of the sanitary condition of the country, in the drainage of malarial swamps, it would have given a greater return than all that has been wasted under the guise of promoting commerce.

In this connection, another thought suggests itself, that is, the employment of the idle labor in this public improvement. There are now many thousand able-bodied men wandering over these United States, having no settled abode, no employment, and seeking none. The tramp does not starve, some one, therefore, must feed and clothe him and care for him when sick. Now, in view of the fact that the public cares for him, he should be compelled in return to render a *quid pro quo* for his maintenance. No better plan could be suggested than to put him to work digging ditches, draining swamps and eradicating mosquitoes. The inmates of our penal institutions should be utilized in the same manner. These are cared for at the expense of the taxpayer, and many times by those who live in malarial districts.

The employment of this class of persons on such public works would certainly be more humane and less cruel than to pen them up within four walls and keep them in idleness.

DISCUSSION.

DR. JUDSON DALAND, of Philadelphia.—I think we are all convinced of the importance of this subject of mosquitoes and malaria. The demonstration just made more than ever convinces us of this great truth. Despite this there are many unexplained facts, and

although I am not able to state exactly what are the other methods of transmission than the mosquito, I am convinced that while the mosquito is the most important factor, it is not the only one. I entirely concur with the reader of the paper that there is one form of the parasite for the ordinary tertian variety, that there is another form producing the quartan variety, and that there is a third variety causing the æstivo-autumnal form. I believe there is also another, which explains those malignant malarias which occur on the Isthmus, in the neighborhood of Batoum, on the Black Sea, and in various portions of the tropics. The method by which this disease propagates itself within the body is a matter of considerable interest. A few years ago we made some observations on the ordinary type of malaria at the Philadelphia Hospital. They were cases of double tertian, and were observed almost hourly from the beginning of one paroxysm to the beginning of the second paroxysm. In the first place, there was great difficulty experienced in recognizing the flagellate form ; they were seen but rarely. The sequence of events was somewhat as follows : The first recognizable element was a very tiny body which might be called a spore or a minute amœboid mass. The next step appeared to be the attachment of this body to a red blood corpuscle. The next step was the penetration of the corpuscle by this minute body into the stroma of that body. The next step was the gradual enlargement of this mass, which was at first transparent. As the parasite slowly increased in size, one saw first very fine particles of a dark color, and these later became larger, and the amœboid body also increased in size until the latter nearly occupied the whole interior of the red blood corpuscle. At this time was also observed the curious movements in the pigment. I mention these points because you will use the malarial parasite more especially for diagnostic purposes. These pigment particles have a peculiar up and down movement, which is very rapid. After this point is reached, the envelope of the red corpuscle breaks and the organism is free in the blood. Later on we observed that this entire protoplasmic mass disintegrated into what may be called spores, at any rate, spheroidal masses of varying diameters. The malarial parasite evidently fed upon the stroma of the red blood corpuscle, and in doing so took up the hæmoglobin, and converted it into the pigment particles already referred to. This pigment was afterward set free into the plasma of the blood. We also observed certain other peculiarities in certain cases which were interesting.

Sometimes, for some unknown reason, the malarial parasite would penetrate the red blood corpuscle, and on one side the parasite would be within the corpuscle and a tiny stream would pour out until perhaps one-third of the parasite was outside of the corpuscle. Then the stream would break, and a pigmented malarial body would be found floating freely in the blood. We have also observed in the mature pigmented malarial body a multiplication by division. This was clearly observed in one particular case of which I have drawings. It is known that in the quartan variety the pigment is very small and tends to assume a ring form. Frequently in certain of the fatal cases there is some difficulty in making out the malarial parasite. Strangely enough, in the southern part of Russia these cases are said to closely simulate typhoid fever. Professor Gurko, of Tiflis, a celebrated clinician, stated that, in his opinion, the differential diagnosis was only possible by a microscopical examination of the blood and the discovery of this parasite.

We in the north know that typhoid fever is at times complicated by another infection, *i. e.*, malaria. I have, myself, seen this double infection, more particularly among the returning soldiers from Porto Rica and Cuba. In one case, the malarial body was easily discovered, but very quickly the malarial manifestations subsided and the symptoms of typhoid fever developed, while still later, these symptoms subsided and the symptoms of malaria again came to the front coincident with the reappearance of the parasite in the blood. It is not at all inconceivable that when there is a typhoid infection, that the resulting fever and other changes that take place, so alter the the blood that it no longer possesses the conditions necessary for the proper development of the malarial parasite.

The question of latency and immunity are of great interest. Dr. Kinyoun has spoken of people in Africa evidently showing indications of immunity. It is unquestionably true that many of the blacks on the African coast have malaria, so far as the presence of the parasites are concerned, and yet present no symptoms; but if a band of 200 were taken to the mountain-tops, many of this number would develop unmistakable symptoms of malaria. I think that we may say that these persons have a latent form of malaria; they are not really immune. These facts are well known to the natives, and hence they are disinclined to make the ascent of mountains.

Prophylaxis has been dwelt upon at considerable length by Dr.

Kinyoun. The most important points are not only the destruction of the anopheles quadralatus, but also the protection of the community from mosquitoes which have become inoculated from existing cases. It is, therefore, a wise plan to insist that cases of malaria are not permitted to be attacked by mosquitoes.

DR. EVANS.—I have nothing to add of interest to this discussion, nor am I in a position to discuss it from a strictly scientific standpoint; but I should like to mention one fact. In Alabama, according to reliable information, there is what is known as "the black belt," and I am assured by Dr. W. P. Spratling, of the Craig Colony for Epileptics, and by a number of residents of Alabama, that in this swamp there are no mosquitoes, yet in all this region, the most malignant forms of malaria exist and death from it are quite frequent. The reference made by Dr. Kinyoun to the experiment on the island of Formosa, was very interesting to me, and when taken in connection with the fact I have just mentioned, I am at a loss to understand the situation and would like to have more light thrown upon it.

DR. C. P. NOBLE, of Philadelphia.—As a gynecologist, perhaps you do not expect me to know anything about malaria, but it so happens that I was born in a malarial country, and have suffered from the disease myself. That region was very malarious, and in wet seasons the entire profession would be overworked. In that region to-day there is practically no malaria. The country is very low, the highest point of land within fifty miles being not over fifty feet above the sea-level, a great deal of it being only from five to ten feet above that level. The doctors in that vicinity attribute the disappearance of malaria to the fact that the old-fashioned wells have been given up and driven wells have been substituted. In my native town there has been absolutely no change in the physical characteristics, except that artesian water has been substituted for well water.

DR. MARCY, of Riverton.—This is a subject which is attracting considerable attention in our Society. As has just been said, our State Entomologist, Professor J. B. Smith, is investigating this subject very thoroughly, and has made some very practical recommendations for the destruction of the mosquito. There is a commercial side to this question, leaving out altogether the sanitary aspects. Large tracts of land in this State are practically uninhabitable from the fact they are in such condition that mosquitoes breed in enormous numbers and people cannot live there. It is quite within the bounds of pos-

sibility that these lands may be so drained and restored that they may become not only inhabitable, but very productive. The mosquito is certainly an intermediary host, but there are undoubtedly other methods for the propagation of malaria. Some months ago I had the good fortune to be near the Black sea, where malaria is most malignant. In the military hospital there, almost every patient had a severe type of malarial disease. I found that mosquitoes were not very prevalent; hence the mosquitoes there must be very much over-worked, or else there is some other method of transmitting malaria. The practical side of the question should be taken into consideration by us all. Every one present, on going home, should see to it that his patients understand that if buckets of water or rain barrels are left exposed, an excellent breeding place will be provided for mosquitoes. While no doubt the anopheles have most to do with the propagation of malaria, the culex certainly causes us a great deal of suffering and makes a good deal of noise about it. There is no subject that can be taken up by this Society that will be of more genuine value to our State, than this one of malaria and mosquitoes, and the means of ridding our State of these pests which have become so famous, both in verse and song.

DR. C. SHEPPARD.—I should like to give my own personal experience for the benefit of the investigators. For the last forty years I have been troubled more or less with malaria. I have had to take quinine at short intervals annually during all that time. Mosquitoes do not trouble me in the least with the exception of the noises produced by the singing variety. If they bite me I do not know it, because no visible effect is produced. The other members of my family are affected almost as seriously by the mosquito as by decidedly poisonous insects. About two years ago I was suddenly seized with what I supposed to be malaria. I had a violent shaking chill, which lasted one hour, and was followed by a hot stage of one hour, and then by the stage of perspiration. The last had barely subsided when the chill was renewed, and was followed by a hot stage and a stage of perspiration. This continued successively from Sunday afternoon until eleven o'clock on Tuesday. At one o'clock an attack of hiccough set in and lasted for nearly two weeks with but slight intermissions. There was no pain, but vomiting was very distressing, and was thought by some physicians to be due to gastritis. My own opinion is that the vomiting was entirely due to the effect of the chills

upon the nervous system; for as soon as the hiccoughs ceased the vomiting ceased, and I recovered without further interruption. I should like to know whether those chills were produced by mosquitoes, or was the attack one of malaria arising from some other source.

DR. E. B. SILVERS, of Rahway.—Having lived in a malarious district all my life, I have been taught some valuable lessons. We know that we can tolerate a great deal of malaria, and that when we leave a malarious locality and go for some time into one free from malaria, that we develop chills and fever. I have known of many such instances. If we live in an intensely malarial district and become acclimated to it, it is presumable that our resistance power increases. I have had occasion, professionally, to visit Rahway Neck, where mosquitoes are both numerous and virulent. My horse at each trip losing pounds of "liquid flesh." My patients urged me to locate there. I told them if they gave me a thousand acres I would not live there owing to the pest of mosquitoes. They facetiously replied that "after a year's sojourn, I would not mind them, as I would be pierced full of holes, and then these mosquitoes would go in the old holes and I would not mind them."

Around my residence I have tried to raise plants that were considered obnoxious to mosquitoes, particularly pennyroyal and the California castor oil plants, with no practical results. I have been told that in some parts of South America they have planted around their abodes, plants that were protective. The names of such I have forgotten. In our city we have found that the removal of our dams, reclaiming large tracts that were formerly occasionally submerged, good sewers and clean back yards—in a word, good hygienic laws, faithfully observed, are the best prophylactics against both malaria and mosquitoes.

DR. ARMSTRONG, of Rutherford.—In our meeting two years ago at Deal Beach I read a paper in which I touched upon this subject. I am very glad that Dr. Kinyoun has advocated in this paper the education of the people with regard to this matter. I suggested at the time that a committee be appointed to carry on this work of education, but that committee was not appointed. The commercial aspect of this question should not be lost sight of, for, I believe, the depreciation in value of lands is exceedingly great. The theory advocated as to the propagation of malaria by mosquitoes I believe to be correct. The question of susceptibility seems to play an important part, just

as it does in other diseases. We know very well that every one exposed to scarlet fever does not contract that disease, so it seems to be a question of soil as well as inoculation.

DR. KINYOUN.—With regard to the malignant fevers referred to by Dr. Evans, I would say that this form of fever occurs all along the Atlantic and Gulf coasts from Norfolk, Va., to beyond Galveston, Texas. The anopheles mosquito has been found in all the localities in which these malignant fevers have occurred, I, therefore, cannot offer any explanation of the cases of fever referred to in Alabama, save that a careful search has been made for the anopheles.

Another manifestation of malarial fever is that complicated with hæmaturia and jaundice, the so-called "black water fever." There is yet a diversity of opinion as to the exact cause of these fevers. The majority of observers hold that it is due to the malarial parasite, while Koch, Sambon and Yersin believe it to be due to some other cause than the malarial parasite. Certainly the malarial parasite is found in the majority of these cases, particularly when the examination is made in the earliest stages of the disease. If the contention of Koch is correct, then there must be a mixed infection; that is to say, the malarial parasite associated with the cause of the "black water fever."

I am more and more impressed with the idea that the day is not far distant when we must accept the theory of the plurality of species of the malarial parasite. Many of the pernicious malarial fevers observed in Africa, the West Indias, Central and South America, appears to me to be due to a different species of the parasite than those observed in this country. Certainly one would be led to believe that this is a fact when examining cases of pernicious malarial fever occurring in Cuba. Probably we will find on further observation an explanation of the reason why the so-called "black water fever" affects only certain localities while in others it is not found. Possibly there is a species of parasite which is transmitted to man by some other insect or agency than the anopheles.

In answer to Dr. Marcy's inquiry, I would say that at one time I was a firm advocate of the water-born theory of malaria, but in view of the recent researches, I have been compelled to abandon it. Persons living in a malarial locality are not always the best witnesses in establishing the habitat of the mosquito. Some deny their presence from local pride, and others simply from the fact that they have become so accustomed to the mosquito bite that they pay no atten-

tion to it. In many instances, I have made inquiries of persons living in mosquito-infected countries, whether or not the mosquito troubled them, and have received a negative answer. Many of these have claimed that mosquitoes would not bite them, yet on a casual observation I have seen as many as seven or eight mosquitoes feeding on their hands or face without their apparently noticing it.

Clinical Contributions to the Knowledge of Tubercular Disease of the Female Urinary Tract.

BY EDWARD J. ILL, M. D., NEWARK, N. J.

It is with some hesitation that I bring the subject of tuberculosis of the female urinary tract before you. I do not mean to treat it in a didatic way, but rather, as the title of my paper reads, in the form of a clinical contribution.

Within the last thirteen years, since I began the study of these cases, the experience gained has been a rather wide and varied one. Some cases have been followed for years, and records of their condition kept. The disease is comparatively frequent and is rarely diagnosed as such. Very few cases that have come under my observation, have been sent with the diagnosis of a tubercular lesion. In other words, the family physician has recognized the disease only exceptionally. The subject is a large one, and if I have succeeded in drawing your attention to this severe illness and especially to its early recognition and frequency, the object of this paper will have been attained.

It has been said that one-half of all inflammations of the bladder are tubercular. If that is a fact, I wish to say that by no means one-half of the cases can be proven so by the finding of the tubercle bacillus, and no diagnosis is complete until the specific bacillus has been found.

The finding of the bacillus is not always an easy matter and much time may have to be spent in the search. Two things must be plainly understood in this connection. First, there is no pyelitis or cystitis without an infection, and, second, there is no pyelitis or cystitis without pus or the copious shedding of mucous membrane elements. I say this because the diagnosis is often made when there is not the slightest trace of pus in the urine.

The origin of tubercular inflammation of the urinary tract is most frequently in the pelvis of the kidney or in the kidney itself. Thus far I have seen but one case (Case 11), where the beginning of the disease may have started in the bladder. The following case of the disease of the pelvis of the kidney could here be cited:

Case 1.—Tubercular inflammation of the pelvis of the right kidney. Hematuria. Nephrectomy. Cure.

Mrs. A. M., married ten years, age forty-four years, has been in poor health since she ceased menstruating three years ago. She entered St. Michael's hospital on January 22d, 1903. Since November 24th, 1902, has been passing bloody urine constantly, has had much back-ache and nausea and a constant pain in the right loin, worse when setting down. This has reduced her so much in health that she looked for help. Medication had no effect on it. A catheterization of the ureters showed that the blood came from the right kidney. No tubercle bacilli were found, though repeatedly looked for by the bacteriologist. A malignancy of the right kidney was suspected. An exploratory operation was done on January 29th, and the kidney drawn out of the wound. It was rather a small organ. The pelvis of the kidney felt as though it contained a foreign body and was opened by a longitudinal incision. A very firm blood clot was all that was found.

The fear of continued hemorrhage prompted the removal of the kidney, which with two inches of the ureter was sent to the pathologist of the hospital, Dr. Teeter. He reported tubercular ulcerations in the pelvis of the kidney eroding some of the blood vessels.

The patient thus far remains well and is much improved in health.

Not only does the resistance of the bladder to the tubercle bacillus seem great, but the bladder will readily throw off the disease as soon as the original focus has been removed, as is shown in the following cases:

Case 2.—Tubercular left kidney and ureter; extensive tubercular ulceration of the base of the bladder; nephro-ureterectomy; recovery; normal bladder at this date.

Four years ago I presented to this Society the specimen and report of the case of Miss P., a seamstress, aged twenty-seven. She was sent on April 27th, 1899, by Dr. E. DeL. Brandin, because for more than a year she suffered from more or less pain in the

left lumbar region, not severe enough to incapacitate her until a month ago. About February 1st, 1899, she also began to have frequent and painful urination, lost strength and flesh. She passed water every twenty or thirty minutes and was up and down day and night. Dr. Bradin soon discovered that she had pus in her urine as well as tubercle bacilli and connective tissue particles. The number of bacilli in the urine was very large.

An examination disclosed a very thick left ureter and several tubercular ulcerations at the base of the bladder and at the opening of the left ureter. There was slight rise of temperature, but no hectic.

On May 24th, 1899, the left kidney and ureter were removed. It was found that she had a cheesy abscess of the kidney as large as a walnut and the ureter was so much thickened that the lumen was nearly obliterated. She rapidly got well. For about three months tubercle bacilli were occasionally found in the urine and since then she has remained well, having been married a year after the operation. At present her urine is normal, as is also her bladder.

Case 3.—Tubercular right kidney and ureter; tubercular ulceration at the meatus of the right ureter and its surroundings; nephro-ureterectomy; recovery. A normal confinement within eighteen months after the operation; normal urine at this date.

Mrs. S. S., Russian, aged twenty-four years; married, has two children and is in good general health. She presented herself on June 26th, 1901, through the kindness of Dr. Parsonette, complaining of painful urination. There had been pains in the right iliac region for some months.

Dr. R. N. Connelly found her urine to contain pus, tubercle bacilli and shreds of cellular tissue. To Dr. Connelly I am much indebted for many favors in these cases. Upon catheterization of the ureters it is found that the left kidney is healthy and the right kidney is diseased. The endoscope shows the bladder to contain a few tubercular ulcerations about the right ureter.

Typical nephro-uterectomy was performed on June 28th, as in the foregoing case. The incisions were thirteen c. m. long in the loin and nine c. m. long in the right iliac region, leaving a bridge between of seven c. m. She made an afebrile convalescence, and was discharged cured in twenty-six days. She became pregnant within six months, and was delivered by Dr. Parsonette in a normal labor. At no time

did the urine show anything abnormal during the pregnancy nor since.

Case 4.—Extensive tubercular ulceration of the right kidney and ureter; extensive ulceration of the bladder; nephro-uterectomy; recovery; urine perfectly normal December 4, 1902.

Miss E. B., aged twenty-two years; single; stenographer, and of good family history. She presented herself in fair general health on April 6th, 1901, complaining of frequent and painful urination since three months, and constant pain in the right lumbar region. On questioning, it is discovered that she never eats meat nor drinks milk, living on eggs, vegetables and cereals. The pain was so great that she was unable to follow her employment. Her urine was found to contain thick, heavy tubercle bacilli and shreds of cellular tissue and pus.

The right kidney could not be made out, but the right ureter was much thickened and many tubercular ulcerations were present in the posterior lower half of the bladder. Catheterization of the ureters showed the disease to be confined to the right side. The left kidney seemed normal.

April 9th, 1901, operation. Lumbar incision over the right kidney—that is, from the end of the last rib downwards and forward for about nine centimeters. The muscles were not cut, but all fibers were separated.

The kidney was a large one, and was brought out with some difficulty. The vessels were ligated with a grad ligature and the ureter gradually enucleated so far as the finger could reach.

An incision of six centimeters was then made at the edge of the rectus in the right iliac fossa, parallel with Poupart's ligament and down to the peritoneum. The separation of the ureter was continued through this opening until its insertion into the bladder was reached. It was cut between two ligatures with the cautery, and the lower stump brought out through the vagina, where it was cut off with the cautery close to the bladder after ligating with catgut.

The very large kidney was found to be filled with milliary and with large tubercles and several small abscesses. The ureter was very much thickened, so as to appear about like a steel sound, No. 36, French.

Both wounds were drained with gauze. On the next day the patient's temperature rose to 104° and the pulse to 140 per minute. The wounds were opened all over, but no discharge showed itself.

She was given twenty c. c. m. of antistreptococcus serum without any result, and went along for some months with a bad septic condition of which she eventually recovered and is perfectly well at this date. Her urine and bladder were last examined on December 4th, 1902, and found to be perfectly normal in every respect. At that time she appeared to be the picture of health.

From the history of these cases it becomes apparent that the diseased portion of the bladder may regain its health and resection of the diseased portion is not a necessity. Even the ureter will apparently recover, as is shown by the following case:

Case 5.—Extensive tubercular destruction of the right kidney and ureter. Tubercular ulceration of the bladder. Nephrectomy. Recovery.

Miss R. W., aged thirty-five years, single, seamstress, of good family history; was sent through the kindness of Dr. Gage on March 1st, 1901. This woman had been suffering for a year from great pain in the right lumbar region running down through the right iliac region into the bladder. There was frequent and painful urination. On examination the urine was found loaded with pus and tubercle bacilli and tissue particles. The urine was ammoniacal and gelatinous. Her general condition was very miserable. She had night sweats and hectic, and was much emaciated. Her temperature reached 102° and pulse as much as 120 per minute.

The bladder was full of tubercular ulcerations and a thickened right ureter could be felt. The right kidney was much enlarged and sensitive, reaching as low down as the crest of the ilium.

March 5th, 1901, a nephrectomy was performed. There was about a pint of foul pus in the kidney, and great difficulty was experienced in separating the adhesions. As the patient was in bad shape and the operation had to be hastened, the ureter was cut off with the cautery about two inches below the kidney. She quickly improved to the extent that she was discharged in thirty-four days.

For over a year, however, she was said to have remained very miserable with the tubercular disease of her bladder. Within a few weeks I have heard from Dr. Gage that she is now in excellent health and seemed to have recovered entirely.

I do not wish it understood, however, that I would advise to leave an infected ureter in the patient. I would simply cite this case as a proof how much nature will do to throw off the disease when the original focus has been removed.

It is for this reason, also, that the writer doubts the assertion that bladder tuberculosis occurs with any frequency through the blood current, but rather by contiguity. Why, otherwise, should these patients get well?

The early and most frequent subjective symptoms are pain referred to the loin and iliac region of the diseased side and later to the bladder. In Case 1 the patient referred the pains to the loin very early, while Cases 2, 3 and 4 also showed the later pain in the bladder. Now and then they complain of pain along the course of the ureter, and this is so severe that I have known the appendix to have been removed by a prominent surgeon by misapprehension.

This symptom would also show that the infection of the bladder was a later stage of the disease.

The pain at urination always means an infection of the bladder. The infection is most frequent at the trigonum and at the meatus of the ureters. In the old cases when there is difficulty to retain urine, after the desire to pass it once comes on, means an infection of the neck of the bladder.

Hematuria should always be looked at with suspicion. While blood that comes from the kidney most commonly means malignant disease or stone in the kidney, the fact that it may be tubercular, should not be lost sight of. The following cases will illustrate the point in question. There being but three cases of all reported in this paper that showed this symptom. Besides Case 1, already cited, I wish to draw your attention to

Case 5.—Tubercular bladder, right kidney and cervix uteri. Hematuria. Temporary recovery.

Mrs. L. S., aged seventy-six, single, complained in February 1902, of severe pain at urinating, after having had pain in the right iliac region for some time. I had seen her on and off for twenty years for a movable right kidney. Her urine was examined frequently during this time, and on several occasions there was some albumen, never any casts, but always a low specific gravity.

An examination of the urine in February, 1902, showed pus and tubercle bacilli in large numbers. In June and July, 1902, she lost some blood by the vagina, which came from a tubercular ulcer at the cervix. In July there was a sharp attack of hematuria. While in the country she improved rapidly, so that in November, 1902, she no longer had any discharge of blood from the vagina and no painful

urination, though small quantities of pus were still found in the urine.

A relapse of the bladder symptom occurred in April of this year and lasted for a month. During this time tubercle bacilli were again discovered, but at the present writing she is again in good shape and has no trouble with her bladder.

The following very interesting case is one of hematuria:

Case 6.—Tubercular right kidney and ureter. Exsanguinating hematuria coming from the right kidney. Right lumbar pain. Nephroureterectomy. Cured.

E. C., married, age, thirty-nine years, mother of six children, in poor health. Was sent to St. Michael's hospital on November 7th, 1898, for chronic cystitis, by Dr. Hagerty. Since two years she has been unable to retain her urine for any length of time. There was much blood and pus in the urine. The endoscope showed the bladder to be uniformly red, almost like granulation tissue, but no ulcerations.

A vaginal cystotomy was done on November 12th, 1898, and the bladder drained. There was no blood for a year. On November 1st, 1899, she was again admitted to close the fistula and to do a nephrorrhaphy and appendectomy, she having constant pain in the appendix and symptoms referring to the very movable right kidney. The fistula was closed by a flap operation. The appendix removed through a lumbar incision and the kidney fixed. She was discharged well in four weeks, and remained well. Eighteen months later she gave birth to a healthy child.

During the next three years she was very well until May, 1902, when she had much pain in the right lumbar region, and of late there was a very large amount of blood in the urine. The pain in the right kidney was most unbearable; she would have chills and fever for three or four days at a time. Her physician, Dr. Hagerty, again sent her to St. Michael's hospital on November 28th, 1902. A search for tubercle bacilli was made in vain by Dr. Connelly. She gladly accepted the operation of removal of the right kidney, as no blood came from the left kidney by ureteral catheterization. A calculus was expected. On lifting the kidney out of the loin through the lumbar incision, no stone was detected, but an immensely thickened ureter which was certainly thought to be tubercular. The kidney with the whole ureter down to the bladder was removed. At the present writing, on May 17th, the patient is very well, looking after her household duties. With seven children to look after, this is no small matter. Her urine is normal.

The diagnosis of tubercular disease of the female urinary tract is by no means, an easy one at all times. Now and then it is readily made.

Every case of pyuria should be examined for tubercle bacilli when the cause cannot readily be described to some other infection. The sensitiveness of the bladder to the touch per vaginum, is an important symptom in vesical tuberculosis. As we pass the finger up the anterior wall of the vagina to the cervix, and then direct it with its palmer surface forward, to one and then to the other side, we may find a thickened ureter. The normal ureters can nearly always be felt as very thin cords, converging towards the neck of the bladder and losing themselves a little less than an inch above the internal opening of that organ. If the finger is placed at the side of the cervix and close to it, the outer edge of the finger will correspond to the location of the ureter.

The ureter, when it is thickened and inflamed by tubercular disease, becomes a very sensitive cord.

I will not detain you with the endoscopic appearance of tubercular ulcers, suffice it is to say, that in the beginning, the small ulcerated surface is surrounded by small blisters, as a fine herpetic eruption might appear.

When these objective symptoms, coupled with such subjective symptoms as have already been spoken of, present themselves, the diagnosis is absolute. We shall not always be able to find all symptoms, and many times will fail to demonstrate the tubercle bacillus. In the latter case the diagnosis becomes dubious.

The prognosis in the tubercular disease of the urinary tract is usually considered a bad one. Nevertheless there are cases that appear to get well and remain so for years. The following cases are examples in question:

Case 1.—Tubercular bladder and right ureter; pyuria with many tubercle bacilli; apparent cure.

Miss M. O., aged eighteen years, was seen in 1891, with symptoms bladder trouble, *i. e.*, frequent and painful urination. An examination of her urine showed many tubercle bacilli and pus, while the bladder contained many tubercular ulcers in the trigonum and the right ureter was sensitive and thickened. For some years she was under the care of the late Dr. Emma W. Edwards, and became very well. Later she was married and gave birth to a child. At the present time, twelve years after I first saw her, she considers herself well.

Case 8.—Tubercular right kidney and bladder; pyuria with many tubercle bacilli; apparent cure.

Miss F., single, aged thirty, was taken sick with bladder symptoms in the summer, 1893. From then on, she had frequent attacks of painful and frequent urination, and was often confined to her bed with pain. In 1895 she took up the training as a nurse. On September 11, 1897, I saw her with Dr. Mead, in an exceptionally acute attack of pain in the bladder. The urine was found to contain large quantities of pus and tubercle bacilli. Her temperature at that time was 104° and she gave one the impression of being a very sick woman.

The right kidney was prolapsed and very sensitive. Catheterization failed because of the extensive tubercular ulcerations of the bladder. For two years tubercle bacilli were constantly found in the urine but since three years, the urine appeared perfectly normal. While she still has occasional pain in the bladder, there is no pus in the urine.

From 1897 to 1899, she was treated by Dr. Mead, with creosote, sandalwood oil and various tonics. Eggs and milk were an important part of her diet. At the present time she is suffering from some affection of the vocal cords but no tubercular ulcerations are visible.

The very chronic course of the disease is well illustrated in the following case:

Case 9.—Miss D., single, tubercular left kidney and ureter, tubercular cyststis, treatment a general tonic one, remained about the same to this date.

About September, 1890, I saw Miss D., aged twenty-three, a teacher by occupation, who in her early childhood had caries of the spine and is much deformed. For some months she complained of much and constant pain in the left lumbar and illiac region, with frequent urination. The pain at times was hardly bearable, and she often took paregoric to relieve it.

An examination showed extensive tubercular ulcerations between the openings of the ureters. The left ureter was considerably thickened, the right one less so, and the urine contained an occasional tubercle bacillus.

A general tonic treatment and irrigation of the bladder gave her some relief, so that she took up mission work, but had rather a miserable existence. Her condition gradually became quiescent, and in 1898 she took upon herself the care of a country home for crippled

children. Here she lead much of an out-door life, and, at the date of this writing, considers herself tolerably well, though I have not been able to see her nor examine the condition of her urine.

These are the only cases I have been able to follow for many years. Some cases prove fatal rather slowly, while in others, general tuberculosis soon kills the patient.

Case 10.—Symptoms of general tuberculosis, followed by tubercular right kidney and ureter and ulceration of the bladder; death in a few years from general tuberculosis.

Mrs. S. H. was sent to me on October 7, 1897, by Dr. Lewis, of Morristown, who kindly gave me the following history: The patient had been sick more or less since six months. She complained of fatigue, painful and scanty menses, and irregular fever with chills. She was anemic and was losing flesh. Three months previous to her visit to me she had a slight cough and scanty expectoration, in which the bacteriologist could not find any tubercle bacilli. A second examination likewise proved negative.

About this time she began complaining at urination, which was painful at the end of the act but not more frequent than usual. With this there was some pain in the loins and over the region of the bladder. Dr. Lewis reports pus, mucus and occasionally blood in the urine at this time. On one occasion she had a real renal colic.

When seen by me on October 7th, 1897, the bladder was sensitive to the touch, as was also the right ureter, which was much thickened, so far as the finger could reach. The inter-space between the ureters in the bladder was covered with small tubercular ulcerations. The urine was kindly examined by Dr. R. N. Connelly, who reported tubercle bacilli, pus and fibrous tissue cells in great numbers, besides albumen and pus casts.

Her previous history indicating a general infection, a bad prognosis was made and a general tonic treatment advised. Dr. Lewis carried this out, giving her besides, for months at a time, creosote. During 1899 and 1900 it seemed as if she was going to recover. Her bladder symptoms were much ameliorated and her general condition much improved. But later she relapsed and died from general tuberculosis. Bacilli had been found in the sputum long before this. She died in the spring of 1901, or four years from the beginning of her illness.

The rapidly fatal cases in spite of operation are illustrated by the following.

Case 11.—Tubercular right kidney, ureter and bladder, nephro-ureterectomy; recovery from operation; death within two years of general tuberculosis.

Mrs. E. W., thirty years, married, one child, presents herself on October 26th, 1901, in very poor health. The family history is reported as good. She has had constant pain in the right kidney followed by general weakness. She had no cough but there was some suspicion of an apex difficulty. The urine was loaded with pus and tubercle bacilli. Upon catheterization the left kidney appeared normal. The right ureter was much thickened and the bladder covered with tubercular ulcerations.

Because of her great suffering and the evident progressive condition of the disease, her right kidney and ureter were removed, as in the foregoing cases. The ureter accidently was torn off, but was soon found again and removed down to the bladder. How much the accident may have to do with her general infections I am unable to say. The wounds were closed with drainage and the patient discharged in very good condition in four weeks. She remained comparatively well for some months but then developed a cough and died nearly one and a half years later from tuberculosis of the lungs.

In spite of the foregoing case one can conscientiously recommend the operation of nephro-ureterectomy in those instances where the tubercular process is confined to the ureter and kidney, or that have originated in those organs, as such good results are shown by the cases already reported.

That cases do get well or at least remain quiescent is unquestionable. When operation is counter-indicated, such treatment as is recommended for tuberculosis elsewhere, should be instituted. Among those, fresh air, plenty of water, good, easily-digested and wholesome food, tonics and such medicine like creosote, cystogen and cod liver oil find a useful field.

To finish a report of all my nephro-ureterectomies, the following two cases are herewith appended.

Case 12.—Tubercular left kidney. Ureter and bladder. Nephro-ureterectomy. Recovery from operation.

I. M., presented herself at the suggestion of Dr. Charles Young, on February 12th, 1903. She was seventeen years old, single, was well heretofore, except when sick with typhoid two years ago. She also had albumen in the urine at that time. She began to have pain in

the left lumbar and iliac region, which she dated from a fall in September, 1902. The pain gradually extended down into the left iliac and vaginal regions. Soon there was a constant inclination to pass water. She gets up from three to seven times during the night for that purpose. An examination revealed that she had retro-left lateral position of the uterus, a very much thickened left ureter and that her urine was loaded with pus and tubercle bacilli. The right ureter was catheterized and nothing abnormal discovered. On February 26th, a nepho-ureterectomy was performed. Unfortunately she became septic, but soon recovered from the acute symptoms after the use of Dr. R. N. Connolly's anti-toxin serum and a wide opening of the wound. There was left a fistulous tract in the latter part of May. At the same time she gained flesh rapidly in spite of the fact that her urine still contained some pus. Tubercle bacilli were found on June 18th.

Case 13.—Tubercular left kidney, ureter and bladder, nephro-ureterectomy. Death in forty-eight hours from sepsis.

A. G., aged nineteen, single, father died of phthisis, general health is poor. Entered St. Michael's hospital, March 2d, 1903. Menstruation irregular, with some pain and scanty flow. She was hoarse and had been so for some months but no lesion of the vocal cords was discovered. For two years she has had pain in the left loin and since three months complains of much scalding on urinating, and sharp shooting pains in the bladder at all times. She makes the impression of a patient suffering greatly. An examination was exceedingly painful, and she was, therefore, placed under ether for that purpose. There was a much thickened left ureter and tubercular ulcers were found in the lower posterior half of the bladder. On March 28th, the left kidney and ureter were removed down to the bladder. After the operation she vomited incessantly, her temperature rose rapidly and she died in less than forty-eight hours of acute sepsis.

(SEE TABLE ON FOLLOWING PAGE)

Table of Seven Cases of Complete Nephro-Ureterectomy for Tuberculosis.

No.	Name	Age	Soc. Cond.	Date of Operation	Diagnosis before Operation	Diagnosis after Operation	Bact'l and Micros'l Exam. of Urine	Early Symptoms	Immediate Result	Remote Result	Remarks
1	P.	27	Single	May 24, 1899	Tubercular bladder, left kidney and ureter	The same	Pus, tubercle bacilli, connective tissue particles	Pain in left loin and iliac region, later painful urination	Recovery	Neither pus nor tubercle bacilli in the urine within a year	Was married a year after the operation.
2	E. B.	22	Single	April 9, 1901	Tubercular bladder, right kidney and ureter	The same	Pus, tubercle bacilli, connective tissue particles	Pain in the right lumbar region, later dysuria	Recovery	Dec. 4, 1902 urine is normal	Is in perfect health. Became septic after the operation, but recovered after some months.
3	S. S.	24	Married 2 children	June 28, 1901	Tubercular bladder, right kidney and ureter	The same	Pus, tubercle bacilli, connective tissue particles	Pain in the right iliac, late dysuria	Recovery	Urine normal May 28, 1903	Had a normal pregnancy and labor eighteen months after the operation.
4	E. W.	30	Married 1 child	Oct. 30, 1901	Tubercular bladder, right kidney and ureter	The same	Pus, tubercle bacilli, connective tissue particles	Painful urination	Recovery	Died in 18 months from tubercular phthisis	Never entirely recovered from her urinary symptoms, though she was much improved.
5	S. C.	39	Married 7 children	Dec. 1, 1902	Calculus in pelvis of right kidney	Tubercular right kidney and ureter	Blood in the urine in large quantity No bacilli	Pain in the right lumbar region	Recovery	May 17, 1903 is perfectly well	
6	I. M.	17	Single	Feb. 26, 1903	Tuberculosis of bladder, left ureter and kidney	The same	Tubercle bacilli, pus and connective tissue particles	Pain in the left iliac region, later frequent urination	Recovery	June 18, 1902 urine contained some pus and tubercle bacilli	The wound became septic, but in due time the girl got well.
7	A. G.	19	Single	Mch. 28, 1903	Tubercular bladder, left kidney and ureter	The same	Pus and tubercle bacilli	Pain in the left loin	Septic death in 2 days		

Table of Two Cases of Nephrectomy for Tuberculosis.

No.	Name	Age	Soc. Cond.	Date of Operation	Diagnosis before Operation	Diagnosis after Operation	Bact'l and Micros'l Exam. of Urine	Early Symptoms	Immediate Result	Remote Result	Remarks
1	R. W.	35	Single	Mch. 5, 1901	Tubercular bladder, right ureter and kidney	The same	Pus, tubercle bacilli and tissue particles	Pain in the right lumbar region	Recovery	Was well when last heard from, March, 1903	The very miserable condition of the patient prevented a complete nephro-ureterectomy.
2	A. M.	44	Married	Jan. 29, 1903	Probably cancer of the left kidney	Tubercular Pyelitis	Blood in urine, coming from the left ureter	Hematuria, pain in left loin	Recovery	Well when last heard from	Urine cleared up in a week. Diagnosis was made by the pathologist only.

DISCUSSION.

DR. HORACE G. NORTON, of Trenton.—The Society is certainly to be congratulated on the presentation of such papers as this. Undoubtedly more attention should be given by the general practitioner to the diagnosis of tuberculous disease of the genito-urinary tract. I am very sorry indeed that Dr. Ill did not have time to enter into the matter of the diagnosis of these forms of disease. Operations on cases in which the disease is confined to one kidney are apparently very successful—sometimes a nephrectomy and sometimes a nephrotomy. Ordinarily more cases of tuberculous disease of the urinary tract occur in the male. I understand that the author does not think the kidney is likely to become infected through the bladder, or that the disease proceeds upward from the bladder through the ureter. This is a mooted question, but I believe the kidney and bladder may be infected both by an ascending and a descending degeneration. I have seen some cases of tuberculosis of the bladder that so closely simulated stone in the bladder that a good deal of unnecessary and harmful sounding of the bladder has been done.

DR. ILL.—I did not mean to say that the kidney is not affected through the blood current, but that the bladder exhibited great resistance to tuberculous disease, and that the bladder is less liable to infection from the blood current.

DR. PHILIP MARVEL, of Atlantic City.—I should like to ask Dr. Ill with reference to the bacilli. The author stated that it was difficult at times to find the tubercle bacilli, but he did not mention in his paper the danger of mistaking other bacilli, and especially the smegma bacillus, for the tubercle bacillus. I should like to know if there is any better means of differentiating between the two than washing out the preparation with pure alcohol. There is such a great similarity between the two bacilli that it is with difficulty that the ordinary observer is able to differentiate them. We have employed the method I mention, and so far it has apparently yielded trustworthy results. Of course the catheter is another means used.

DR. ILL.—One method is to wash out the coloring matter from the bacilli with alcohol. Another method is to very carefully catheterize the patient, in order to obtain a specimen for examination, and never to make use of urine that has been passed by the natural channels for such an examination. If the catheterization is carried out with aseptic precautions the smegma and other bacilli should not be present.

TWO UNIQUE MALFORMATIONS OF THE FEMALE GENERATIVE ORGANS; ABSENT VAGINA WITH ATRESIA UTERI; UTERUS DIDELPHIS WITH LEFT HEMATOMETRA.

BY EMERY MARVEL, M. D., ATLANTIC CITY, N. J.

While many types of malformations of the female generative organs are not uncommon, the two cases which I wish to report—(1) An absent vagina with atresia of uterus; (2) Uterus didelphis with left hematometra—seem each sufficiently unique in itself to merit record. When we consider the development of these organs through the fusion of the Müllerian ducts, the two canals coming together to form one canal, and this common canal segmenting to form the respective organs, it is surprising that malformations of these organs are not more commonly met. The failure of the Müllerian ducts to unite, results in one of two conditions, either further development is made, with duplication of that organ, or atrophy takes place leaving only a rudiment or no prestige of the organ at all. If a given segment does not coalesce, but continues to grow, two separate canals develop. Such a condition is normal in the upper segment which forms two fallopian tubes. When, however, the first of the lower segments fails to unite and further development takes place, some form of a double uterus, such as uterus bisepta, uterus bifida, uterus bicornis, or as in the case here to be reported, uterus didelphis results. Should atrophy take place, an atresia of the segment, or its obliteration, as in the absent vagina, is the consequence. When, however, defective formation takes place, an impaired or disturbed function is consequent and sooner or latter a marked pathological condition results. Such was the manifestation in the following cases:

ABSENT VAGINA WITH UTERINE ATRESIA. (Figure 1.)

In February, 1901, a patient called at my office, saying that he and his wife wished me to arrange to remove his wife's ovaries. When asked the reason for this unusual request, he said that every month his wife suffered most severe pains for about five days, and that two days of this time, she was most like a mad woman with the agony. Upon further inquiry, he told me his wife had never had her sickness, and I learned that complete coitus had not been

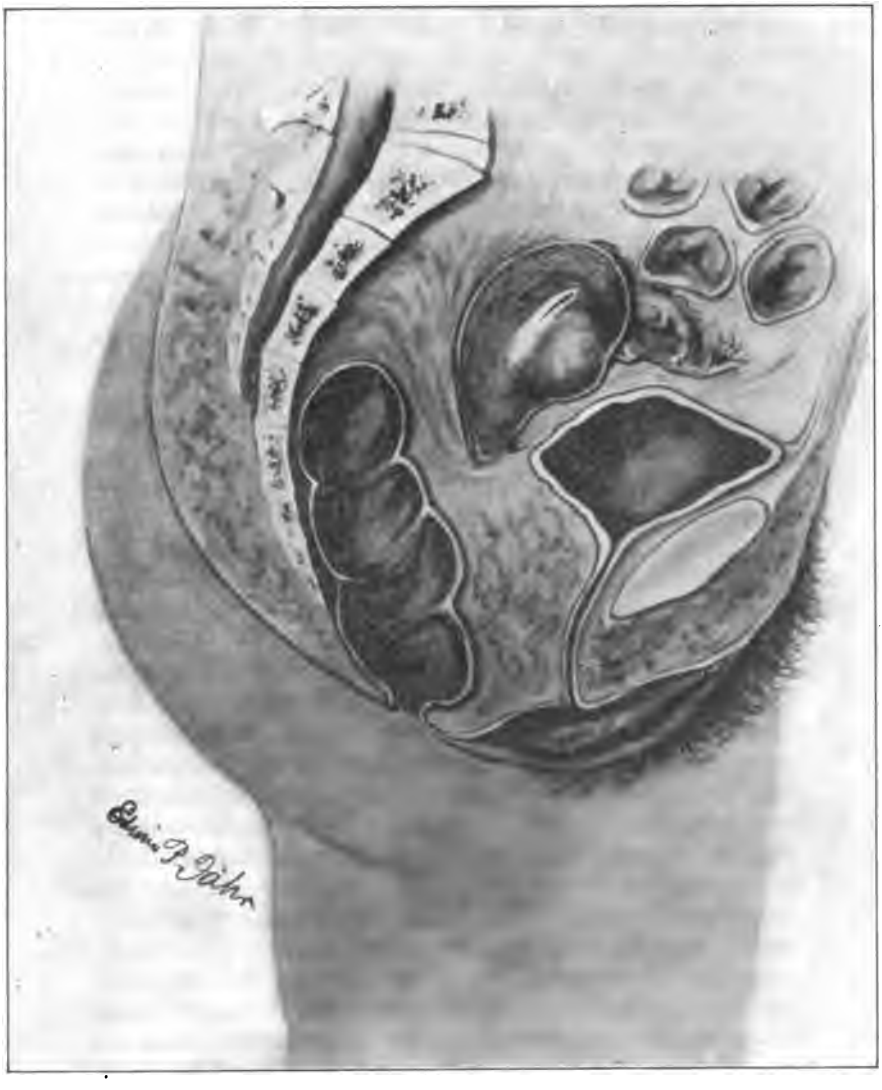

FIG. I.—CONGENITAL ABSENCE OF VAGINA.

attained. I immediately thought of an imperforate hymen or atresia of the vagina. I arranged to see his wife the next day, and found a well-nourished and apparently, perfectly developed woman, with the following history:

Age, 23; married 5 months; never menstruated; at 17 she experienced an attack of pains, which are described to have been a feeling of burning with fullness and bearing down in the lower abdomen. The pains continued for five days and disappeared to return again every twenty-eight days for three consecutive months. Subsequent to this time, six months passed without recurrences, when the pains again returned and have since regularly recurred every twenty-eight days. These painful periods have progressively grown worse. For the past year she has been obliged to remain in bed each time. More recently they have been so severe, that her husband claims she is delirious for a part of the time. Morphine is reported to have been the only treatment that has given any relief whatever, and it has been necessary to frequently repeat it each period to secure any benefit.

Gynecological examination: The labiæ majoræ are well developed; clitoris fully formed and free from adhesions, urethral meatus in normal position and condition. The labiæ minoræ are normal to external appearances, when separated, however, they are found more intimately approximated than is usual. The inner surfaces are continuous one with the other, giving the appearance of an imperforate hymen. There being no entrance to the vagina, the rectum is utilized for a digital examination. The rectum is free, and for a distance nearly the length of the examining finger, no intervening resistance could be felt between the finger in the rectum and the palpating hand above the symphysis pubes except the bladder. The tip of the examining finger in the rectum impinges upon a resisting mass which can be felt by the opposing hand, but not definitely circumscribed. This mass is taken to be either the uterus or retained menses in an atresed vagina. Both ovaries are palpable and enlarged.

Operation, March 10th, 1901:—The abdomen was opened to determine more clearly the condition of the uterus and ovaries. The mass felt by the finger in the rectum proved to be the uterus of full normal size. The tubes seemed normal in appearance, although no attempt was made to determine positively the patulosity of their lumen. Both ovaries were enlarged by several small cysts. Each was de-

livered and all the cysts incised. The cavities were cauterized with thermo-cautery, and the ovaries replaced. The abdominal wound was closed and an effort made to establish an open way from the cavity of the uterus to the vulva. In the lithotomy position the space between the labiæ was incised and a dissection was made through the interstitial tissue of the vesico-rectal space. The cervix was found, and with difficulty entrance made through it to what was supposed to be the uterine cavity. Flaps were formed from the scant surface of the labiæ minoræ and reflected into the made vaginal space, and the cervix uteri brought down and anchored with cat-gut sutures. Two weeks later, the anchoring stitches were torn out. The uterus had receded and the new vagina was closing. A second attempt to establish a vaginia was made. This time the same dissection was repeated; a glass tube long enough to reach from the cervix to the vulva was inserted through the cervix into what was supposed to be the uterine cavity. This tube was anchored with silver wire, and the patient left the bed in a week. For two months subsequent to this operation she had no pains, although the tube came away in four weeks. The third month the same pains recurred in mild form and continued to recur each month subsequently. Each period grew more severe until I was appealed to again by her husband to try no further experiments but to remove the cause. I had observed these periods of pain several times and they were most severe. More severe than any dysmenorrhœa I had ever seen. On September 17th, 1902, the abdomen was again opened and the uterus, tubes and ovaries removed en masse. The left ovary was as large as a hen's egg and the right ovary fully the size of a goose's egg and surrounded with generous adhesions. The enlargements were due to cysts, many of which ruptured in breaking up the adhesions. The uterus seemed much larger than when inspected fifteen months previous and was unusually hard. When a longitudinal section was made, the cervix was found to be fibroid and having no canal. The fundas contained a small slit, about half an inch in length, which was the only cavity in the uterus, and undoubtedly was never entered by any attempt made from below. Peritoneum was brought over all the raw surfaces of the broad ligaments, and the abdomen closed with cat-gut tiers. An uneventful recovery from this operation was made, the patient leaving the hospital in two weeks. When seen June 8th, two weeks ago, she reports herself free from pain, and absolutely well except for some annoyances occasioned by hot flushes.

UTERUS DUPLEX—LEFT-SIDED HEMATOMETRA. (Fig. 2.)

A nervous but well-nourished white woman, twenty-four years of age, referred by Dr. E. H. Harvey, of Atlantic City. Married two years, no children, no miscarriages. Menstruated first at seventeen. Menstruation was very free and without pain, although preceded

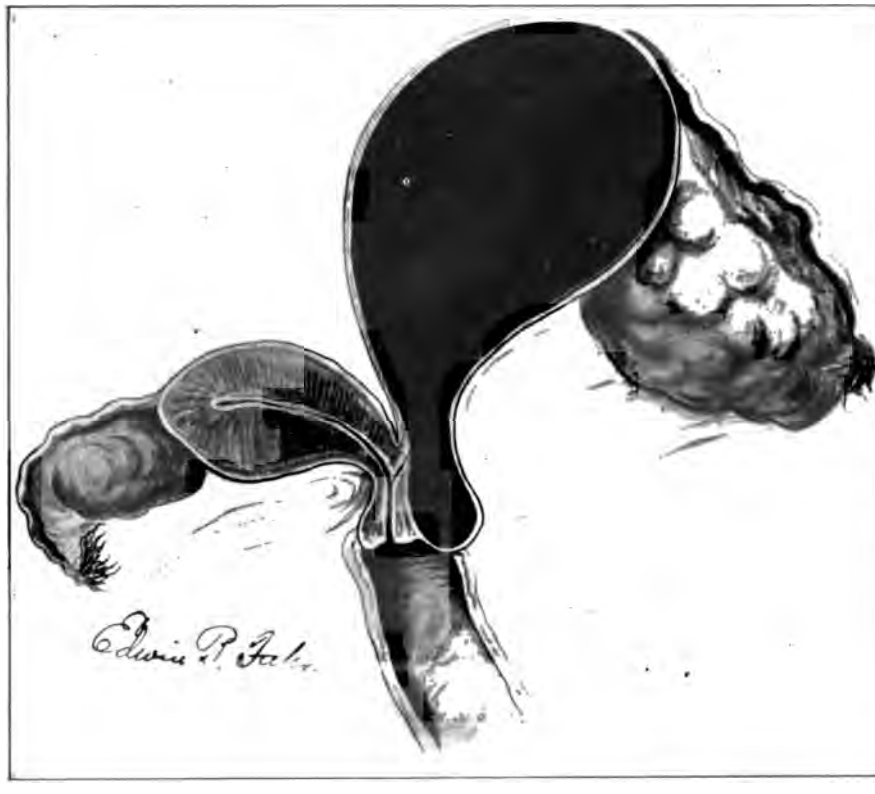

FIG. 2.—UTERUS DIDELPHIS, WITH HEMATOMETRIA OF LEFT UTERUS.

at intervals during the previous two months with headache and bearing-down, left inguinal pains. Did not menstruate again for three months, when menses returned, and during subsequent four years they were regular every thirty-two days, lasting five days. During this time there were no menstrual cramps, but frequently she

had a sense of fullness and bearing down in left ovarian region. For the past two years these discomforts have increased in frequency and severity, and have gradually grown so bad at menstrual periods as to necessitate her remaining in bed the first and second days. Eighteen months ago she noticed an intermittent, bloody, vaginal discharge, possessing an offensive odor. The discharge gradually increased in amount and constancy until during the last six months there has been a continuous show, becoming excessive at the menstrual period. The headache, together with backache, and those symptoms referrable to the lower zone of the left abdomen have grown worse with the increasing metorrhagia. With the conditions growing more severe, a chain of nervous symptoms, sleeplessness and hysterical manifestations have come on. The odor of the discharge has been so foul as to make her presence objectionable to those around her and life almost a distaste to herself. The odor is much like the putrid discharge from a puerperal patient, being even more fetid.

Gynecological examination:—Vulva shows a foul smelling bloody discharge, otherwise normal. The vagina normal except for a bulging area to the left and anterior to the cervix. The cervix high in vagina, and found posterior to the right, otherwise apparently normal. Above the cervix and to the left is a bulging in the vagino-uterine fornix. This mass fluctuates and cannot be separated from the cervix. In the medium line and inclined to the left is felt the uterus slightly larger than normal. The tube and a cystic ovary can be made out distinctly on the left. The tube cannot be detected coming from the right cornu, which seems rounded and not angular. In the right side is felt a tubular body, freely movable, with smooth surfaces and apparently attached to the body of the uterus near the cervix. The right ovary can be detected somewhat enlarged in about its normal position.

Operation September 9, 1902. In the lithotomy position the vagina was exposed. The cervix uteri brought down to the vulva with tenacula forceps. With a bistoury the mass to the left of the cervix was incised. From this incision about a teacupful of gelatinous, bloody fluid escaped. This escaped slowly and possessed the odor of decomposed blood. The cavity was irrigated, and by a small, dull uterine curette explored and evacuated. The cavity was continuous with the cavity of the uterus, but I was unable to find any connection between this cavity and the cervical canal, although I am convinced one

existed. Through a media abdominal incision the pelvic viscera were inspected. The body taken to be the uterus and emptied by vaginal incision is found to have but one tube and ovary attached. The smaller body apparently attached to the cervix is another uterus of diminutive size, and having one tube and ovary which comes off of the right side. The left ovary attached to the larger body is the size of a goose egg, adherent, and contained several cysts. Its corresponding tube was larger than normal, but free from adhesions. The right ovary, attached to the lesser uterus, is the size of a hen's egg—free, and contains several small cysts. The right tube is short and smaller than normal. The cervices of the two uteri seemed to unite at the peritoneal juncture to form one cervix. Just below this location both uteri were amputated, and with their respective ovary and tube removed. While the external surfaces of the cervices were united into one, the point at which the amputation was made had two distinct canals, one continuous with the cervical canal into the vagina, the other continuous into the incision.

The recovery was uninterrupted except for a stitch abscess. She reports May 1st, 1903, that she feels perfectly well with the exception of the hot flushes which occasionally annoy her.

Congenital absence of the vagina may be due either to an obliteration of a segment of the Müllerian ducts, or to an imperfect division of the cloaca. Defective formation of the Müllerian ducts, failing to provide a vagina, is likely to have rudimentary uterus and ovaries. In the case here reported, these organs had attained their full size. The reverse condition is reported by Antonio Bustello-Livola[1]. He observed the absence of the uterus, tubes and ovaries with a fully developed vagina in a prostitute.

The periodic pains having the cyclic time of menstruation must have been ovarian and due to ovulation. Both ovaries had undergone hypertrophic changes and cystic degeneration. There was no evidence of true or vicarious menstruation, but the presence of an apparently functionally normal uterus and ovaries encouraged me to hope to succeed in bringing about normal menstruation and establish a vagina. Emmett advised this effort[2]. Thomas[3] advised efforts to be made to establish a vagina (*a*) when there was retained menstrual fluid; (*b*) a uterus can be distinctly discovered and the patient suffering from absence of menstruation; (*c*) if the necessity for sexual intercourse be imperative.

Had I known of the uterine atresia I could not have hoped for a favorable result, but there was no way by which I could well determine that. After puncture of the cervix, in which there was no canal, the sound entered the uterine tissue with comparative ease, so much so that I mistook it for the uterine cavity. After inspecting the uterus through a section of its body, and studying the course of the patient, I am fully convinced that the remedy for her relief rested in the removal of the ovaries, and the fibroid change in the uterus is of itself sufficient, I feel, to justify its removal.

Dr. John G. Clark[4] reports a case of bicornate uterus, one horn of which was filled with pus and having a downward saculation, which pressed upon the lateral wall of the vagina. Dr. Clark's case and that of my own have very analogous conditions with this difference—that in his case the retained menses had become infected. A strange coincidence in these two cases is that, rare as it is, both cases seen were referred by Dr Harvey. The first case Dr. Harvey saw at Latimer, Pa., and referred to Dr. Clark, January, 1901. The other case he first observed a little more than a year later. The case which was operated on by Dr. Clark and reported by him, the infected cornu was amputated and removed, leaving the normal cornu. Dr. Harvey tells me that he has just heard from this patient, and that she has given birth to one well-developed child and has since miscarried at three months.

In my own case, although it was not demonstrated, the evidence favors the fact that there was some opening present between the uterine cavity distended with blood and the free cervical canal of the right uterine cavity, and that this opening was not sufficiently large to give free drainage. This was evident by the discharges through the vagina being of the same material as was the retained menses in the distended uterine cavity.

The question of removing both of these uterine bodies, or only the distended one, was considered while the abdomen was opened, but in view of the fact of both ovaries being markedly cystic, it seemed advisable to me to take both out at this operation.

I cannot conceive of any drugs, or any, but operative remedies, giving any benefit in either of these conditions, and I am fully convinced that radical operation was the only remedy in one case and to have been the preferred treatment in the other.

1. Annals. Gyn. and Pediatry. No. 12, Vol. XV.
2. Op. Cit., p. 189.
3. Op. Cit., p. 227.
4. U. of P. Med. Bulletin, No. 3, Vol. XIV.

DISCUSSION.

DR. E. J. ILL, of Newark.—I think the author deserves much credit for bringing these interesting cases before us. I have seen the condition described in the second case on three or four occasions. One of these patients, a woman of sixty, had a foul discharge from the vagina. She had never been married. From the discharge I suspected malignant disease of the uterus. The examination puzzled me at first, since I could find no origin of the discharge, because my examination was conducted through the right vagina, while the carcinoma existed in the body of the left uterus. Besides this there was a large ovarian tumor coming from the right ovary. In other words, the case was one of two vaginæ and two uteri, carcinoma of the corpus of the left uterus and an ovarian tumor of the right ovary.

The case of hematometra of one-half of the uterus, I would have treated differently, as I did in two cases that came under my observation. I opened the blood sack through the vagina and stitched the vaginal mucous membrane up into the uterine cavity. Both continued to menstruate normally. I once saw a case like the first one described by the author, with the immense hypertrophy of the clitoris. The patient was a supervising nurse in a hospital, and another nurse came to me complaining that the supervising nurse was a woman of immoral character. She refused trial and left the hospital. Subsequently she returned, and I found on examination a clitoris as large as the thumb and rudimentary vagina. There was an occasional bloody discharge. At first sight this individual appeared to be a man, and not a woman. I warned her not to nurse females. A year or two later I saw her for what was supposed to be an appendicitis, but I found it was not an appendicitis, but what appeared to be an ovarian tumor. An abdominal section showed a strangulated ovarian tumor. This woman told me that she had no desire for male company, but only female company, yet she had ovaries, *i. e.*, an ovarian tumor.

DR. PHILLIP MARVEL.—I should like to ask the reader of the paper to explain the second diagram, because it is not clear to some of us. The tubes are exceedingly long in proportion to the normal.

DR. EMERY MARVEL.—The illustration does not give the natural size, it being entirely diagramatic. The proportion is probably about one to three. The proportion of the ovaries on each side to the respective uterus of that side is about proper. I would have been tempted to take out only one uterus if it had not been for the peculiar

condition present in this case. Another operator adopted this plan, and the attending physician told me that he had heard that the woman became pregnant subsequently and gave birth to a child. I have not been able to confirm this report, but if this should be true I should feel it would be justifiable to attempt to save one uterus were the appendages not seriously affected.

Some Practical Methods of Hydrotherapy for General Practice.

BY ELIOT GORTON, M. D., FAIR OAKS SANATORIUM, SUMMIT, N. J.

In presenting for the consideration of this Society some of the simple, though effective, measures of hydrotherapy, it is my aim to overcome in some degree the apathy and prejudice of the general practitioner toward a subject which merits a larger share of his attention.

The progressive work of such men as Winternitz, in Vienna, and Baruch, in New York, has rescued hydrotherapy from the domain of quackery and placed it upon a sound physiologic and scientific basis beyond the realm of empiricism, and it is largely to these men and their pupils that we owe our present knowledge of the rational application of water to diseased conditions. Correct technique is absolutely essential to good results, and it is the absence of technique—the inattention to the necessary details—which is responsible for the lack of confidence in and the feeling of indifference toward hydrotherapy, so prevalent among the profession.

In this era of progressive medicine it is astonishing that the skin, the largest and most accessible organ of the body, should be so much neglected in therapeutics. Ramified by miles of capillaries and arterioles, the calibre and tone of which are readily influenced; with millions of minute excretory organs, the efficiency and activity of which are easily affected; with myriads of nerve endings directly accessible, we have in the skin an organ through which we are enabled to directly and powerfully influence the blood and lymph vessels, the excretory and the nervous systems. The flexibility and range of hydrotherapy are so great that good results may be obtained from the simpler procedures which require no complicated apparatus. In the various forms of baths, the effect desired must not

be lost sight of. It is just as necessary in hydrotherapy to individualize the patient as in other medical measures, and our use of any prescribed form of bath must be governed as much by the condition of our patient as the effect desired.

In hydrotherapy we are using four agents—moisture, temperature, friction and mechanical force, and it is the manner of using and combining these elements which constitutes its entire art. The better and more elaborate the apparatus, the more exact, of course, can we make our prescription in a given case, but the point I wish to emphasize is that with simple fixtures and with no special apparatus at all, a great deal of satisfactory work can be accomplished. The only absolute essentials are water and a bath tub. With these, a bath thermometer and proper technique, good results can be obtained.

It seems to be an accepted conclusion among most medical men that the chief aim of the cold bath is to reduce temperature and should only be used, if at all, in cases of fever, and that all baths have for their object the modification of temperature. Many, for instance, think the sole object of the Brand bath in typhoid is to lower the temperature, when, as a matter of fact, the chief and important effect is its soothing and calmative effect upon the nervous system. Baruch says: "Temperature reduction is perhaps the least potent factor in the therapeutic effects to be expected from the application of water," and "the long prevalent idea that in its capacity of reducing temperature lies the chief strength of hydrotherapy, is fallacious."

The limited time at my disposal prohibits the presentation of clinical data in support of statements to be made, but I propose to direct your attention to a few practical, yet simple, hydrotherapeutic measures, and to point out some of the conditions where they are a most valuable adjunct to other forms of treatment. Let us consider first the technique and therapeutic purpose of the so-called warm full bath. In this bath the entire body, except the head, is covered with water. The tub is filled three-quarters full at a temperature of 98° to 102° and should be kept at that temperature. The head should first be bathed with cold water and wrapped in a towel wrung out of cold water. Preparatory to all hydrotherapeutic measures the head should first be wet with cold water and encircled with a cold, moist towel. This is an important point in the technique

which is often overlooked. The patient lies in the bath without effort, and is left undisturbed for fifteen minutes: or, in some cases, gentle friction over the body by an attendant may be employed. This bath has a marked sedative action, and is very useful in cases of insomnia and delirium, for reducing temperature, for relieving pain and to quiet nervous irritability. When used for insomnia, delirium, or temperature reduction, friction when in the water and active towel rubbing after emerging from the tub, should be omitted. The capillaries are dilated and the internal blood pressure is much reduced. Respirations become slower and are at first shallow, but later are full except the bath be too prolonged. The pulse is first slowed and then increased in frequency. When prolonged, and it should be of at least twenty minutes duration in insomnia, the temperature rises but returns to normal in half an hour. On leaving the bath the perspiration should be abundant, and herein lies one of its chief virtues in the treatment of kidney diseases. Should palpitation of the heart or a sense of great heat occur, it should be stopped. Bælz, of Tokio, has demonstrated that the former teaching that colds are easily contracted after the hot bath, is erroneous, for the reason that the paralysis of the cutaneous vessels lasts some time and prevents their contraction when exposed to cold. In patients suffering from heart disease, the temperature of this bath should never exceed 95°.

The half-bath.—The half-bath is by far the most important of the more simple measures, because of its great range for modification to meet existing conditions and its ease of administration. It contains all the elements of hydrotherapy—moisture, temperature, friction and force. The technique is as follows:

The head is first wrapped in a towel wet with cold water, a warm drink is given, and the patient, after complete immersion, sits forward in the tub, which is less than half full of water at a temperature of 90°. With a two-quart dipper the attendant throws water dipped from the tub, with some force, against the back and upper extremities, and at the same time the patient rubs his abdomen and chest. This procedure is maintained for one and one-half minutes. The patient then sits back in the tub and the water is thrown against his chest for the same length of time. The attendant then rubs the back, chest, arms and legs briskly for about one minute. The temperature of the water is then reduced from three to five degrees and the water throwing

process repeated, after which the patient is rubbed dry. As he becomes accustomed to repeated baths, the water at the start may be slightly reduced in temperature from day to day, and a difference in temperature of 5° maintained between the two stages, but the water should never be reduced below 68°. If in doubt as to the proper temperature with which to begin, it is a safe rule that the bath may be started with water 10° to 12° below the body temperature of the patient. Its average duration is six minutes.

The effect of the half-bath depends upon the way it is administered. The first effect, however, is stimulative, from the splashing, and the subsequent reaction is brought about by the rubbing and the splashing with colder water. Cold baths of short duration with brisk rubbing give greater stimulation, while warmer baths with longer duration have a sedative action. In diseases of the central nervous system, it must be given warmer with a range of temperature from 90° to 80°. It is then a valuable agent for the relief of the lancinating pains of tabes dorsalis. In the aged, the first temperature of the bath must be about 95°. In tuberculosis its effect is most marked. Its daily use, six minutes in duration, beginning at 85° and ending with water at a temperature of 80°, lessens the distressing cough, improves respiration and the vascular tone, increases the appetite and retards general wasting. Another disease in which this bath is indispensable is epilepsy. You are familiar with cases of this disease in which the prolonged administration of bromides has produced an unsightly and disagreeable acne, necessitating their discontinuance. In this condition, the rapidity with which the skin clears up and the breath becomes sweet is remarkable, and a greater tolerance is also established for the bromides. The bath is quite as important where bromides are administered for any length of time as the bromides themselves. In neurasthenia and hysterical conditions it may also be used with great benefit, for the tonic effect upon the nervous system. In chronic gastro-intestinal complications, particularly cases of chronic gastritis and enteritis, this bath, followed by the pouring of water upon the abdomen from a pail held at a height of four feet and repeated three to six times, often effects marked improvement. This is the "thermic massage" of Winternitz.

The half-bath can be used with or without the hot-air cabinet, but when the latter is used it must precede the bath. All patients will shiver when first entering the tub, but this ceases in a few minutes

when reaction begins. When properly administered, the skin is reddened and the after effect is a pleasurable one of warmth and well-being. The effect of the half-bath is that of a general tonic. It is a stimulative, refreshing measure, and is only contraindicated by chill, a state of collapse, or any condition of extreme weakness where the giving of any bath would be hazardous.

Wet packs.—The wet packs, hot and cold, are other simple measures of great value. These must also be given with rigid adherence to technique, else they are of no value. The unfavorable results so often obtained from their use in private practice are often chargeable to the lack of knowledge of the proper technique on the part of the nurse.

The cold pack is the one most in vogue, and is used in fevers for its antipyretic effect, and is especially valuable in cases with high pulse rate. In diphtheria and angina the renewed cold pack, according to Winternitz, is almost a specific, and in functional motor neuroses, chorea, athetosis, neuralgia, goiter, palpitation of the heart, kidney disease and diabetes—in fact, in any condition where a marked diaphoretic action is desired, it is invaluable. As a sleep producing agent it has no equal, and distressing cases of insomnia, where the ordinary hypnotics have been of no avail, are often relieved absolutely by the cold pack. In cases of extreme weakness and in heart disease it is usually contraindicated, and if used must be given with great caution. In maniacal conditions and in states of delirium the sedative effect of a prolonged cold pack is very marked, and these patients often go to sleep while in the pack. The motor restlessness is greatly relieved, the patients become quiet and sleep is soon induced. In nephritis the hot pack is preferable. In neurasthenia, hysteria and all functional neuroses, the cold pack is highly commended. The temperature of the cold pack is from 70° to 60° and the hot pack 100°. They are given in the following manner:

Three woolen blankets are placed upon the bed. A coarse linen sheet wrung out of water at the desired temperature is placed over the blankets. The head is wet and encircled with a cold compress. The patient then assumes the recumbent position upon the sheet with the arms over the head. One edge of the sheet is placed at the side in line with the axilla, and the sheet is then brought around to the front of the body. The arms are then placed at the sides, and the sheet is carried around so as to envelop the arms and shoulders. It is then pressed between the limbs, and in this way every part of the

body is covered and no two points of skin are in contact. The sheet must come closely around the neck above the shoulders and the feet must also be well wrapped, each one separately. It is very important that the sheet comes into contact with every part of the body, and that no two skin surfaces are in apposition. The blankets are then wrapped around the sheet in the same manner and brought snugly around the neck. It is absolutely essential that all air be excluded, and if the blankets do not come snugly around the neck the patient will experience much discomfort. When properly applied there is no discomfort after the first shiver from the cold sheet. The duration of this pack should never be less than one-half hour and from that to two hours or longer, depending upon the effect desired. During the pack, drinking water should be given freely, and while in the pack the patient should never be left alone. When practicable, it is customary to follow all packs with the cold rain bath of five seconds duration, and this again by brisk rubbing.

Let me recapitulate the salient points in the technique of the pack: 1. Head wrapped in a towel wrung out of cold water. 2. Sheet wrapped so that no two skin surfaces are in contact. 3. Blankets wrapped closely around neck so that all air ingress is absolutely excluded. 4. Drinking water to be given freely. 5. Duration not less than one-half hour. 6. Constant attendance.

Drip Sheet.—Another simple measure largely used for its tonic effect is the drip sheet. This is usually given on rising in the morning, and its technique differs from that of the cold rub only in that the sheet is not wrung out. It is taken dripping from the water at a temperature of 70°, and wrapped around the patient in the same manner as in the pack, the patient standing and the attendant applying rapid friction over all parts of the body through the sheet, until the patient is thoroughly warm. During the rubbing process a pitcher of water 10° cooler may be poured over the head and shoulders. The drip sheet is useful in neurasthenia, states of depression and nervous conditions generally, where a stimulating and tonic effect is desired.

The baths and packs used in the treatment of typhoid need no comment. That hydrotherapy has been one of the chief agents in the reduction of the mortality from this disease is now generally conceded. However, during the past few years, there has been a gradual extension of the field of hydrotherapy to allied conditions, and this agent is now recognized, especially on the continent of Europe, as an

adjunct of the first rank in the treatment of the acute gastro-intestinal conditions of infancy and childhood. This is especially true of the more severe conditions accompanied by high temperature and marked diarrhœa, with frequent watery discharges. In these cases, the administration of the cold pack two or three times daily, if necessary, depending upon the temperature of the patient, is very efficacious. In fact, in the estimation of some, the routine treatment of these cases after this manner, deserves the same consideration that similar procedures command in typhoid. It is certain that this is a valuable adjunct to other modes of treatment in allaying the irritability, reducing the temperature and lessening the discharges of the violent summer diarrhœas of children. The technique is the same as for adults except that the duration of the pack should be from fifteen to twenty minutes. The use of this form of bath treatment in the pneumonias of childhood has many warm advocates abroad, but has received only little support here. I have had no experience with it, but the high authorities who actively advocate its use in these conditions, make it worthy of our serious attention.

Two Cases of Transitory Complete Blindness of Both Eyes.

I. Case: Idiopathic Optic Neuritis.
II. Case: Amaurosis, probably from Autointoxication.

BY CHARLES J. KIPP, M. D., NEWARK, N. J.

Case 1.—Idiopathic Optic Neuritis—Mrs. K. S., aged thirty-two; has been married eleven years and is apparently in robust health. She has given birth to two children, both of whom are living and in good health; the younger is four years old. Patient has always been in good health. No history of syphilis. For some weeks she has suffered more or less from frontal headache. She came to the Newark Eye and Ear Infirmary for the first time December 22d, 1891, complaining of loss of vision of left eye and impairment of vision of right eye. The examination made at this time showed that the exterior parts of the eye were perfectly normal in appearance, and that the movement of the eyes were unimpeded in any direction. On closer examination it was found that *the left eye was blind;* this eye

could not distinguish between light and darkness. *The pupil of this eye was larger than that of the right eye and it did not react to light.* It did, however, respond to light thrown in the right eye. The ophthalmoscope showed clear media and a well marked papillitis. The optic disc was swollen and apparently enlarged. The retinal veins were full and tortous, while the arteries were of about normal calibre. The retina immediately surrounding the disc was hazy but otherwise it was normal. The right eye also showed swelling and enlargement of the optic disc, but not quite so marked as that of the other eye. The retina was transparent except very close to the optic disc. The pupil of the right eye was of normal size and responded readily to light. The sight of this eye was reduced to $\frac{5}{17}$. An examination of the urine showed it to be free from albumin and sugar. Close questioning failed to reveal disease in any other part of the body. She was given iodide of potassium in small doses. She was seen again the next day, when it was found that both eyes were now totally blind. She could not recognize the light of a candle held close to her eyes. The swelling of the optic discs had increased. Their surfaces were best seen with a 3 dioptric glass. *The pupil of the right eye was now as large as that of the left eye, and neither pupil reacted to light.* She remained in this condition up to December 28th, when she could distinguish between light and darkness. December 30 it was found that the pupil of the right eye responded very sluggishly to light but contracted in convergence. The pupil of the left eye responded even more sluggishly than the right eye to light, but also contracted in convergence. She can see movements of hands in front of her eyes, but cannot yet count fingers close to her eyes. She was at this time taking fifteen grains of iodide of potassium three times daily. On January 8th, 1892, it was found that the pupils of both eyes reacted to light in convergence fairly well. The vision of both eyes remained about the same as at last January 14. Can now count fingers with either eye at four or five feet. Has still frontal headache. The optic discs are less swollen and the retina adjoining the disc is more transparent.

January 22. Her vision is now in the right eye $\frac{5}{16}$, in the left $\frac{5}{17}$. *The visual field is intact in both eyes.* Is taking twenty grains of the iodide three times daily. After this time her vision gradually improved so that on February 5th it was in either eye $\frac{5}{8}$. The discs were now almost flat and quite white. The headache had subsided.

On March 15th her vision was about normal in both eyes, and the visual field intact in both. During the following five years I saw the patient at intervals of several months, and always found her in good health. Her vision when I last examined her, five years after the attack, was normal in both eyes, and so were the visual fields. Her health was excellent. I have been trying to find her since, but have not succeeded in so doing.

The absence of the pupillary light reflex for a while made it probable that the seat of the lesion was in the visual tract, this side of the corpora quadrigemina.

The visual centres may also have been involved, but this cannot be proved, as the conduction of visual impressions was interrupted by disease of the tract. The ophthalmoscope showed the existence of a marked optic neuritis in both eyes. Cases in which an optic neuritis has caused total blindness of both eyes, and in which the pupillary light reflex was absent for a time, with subsequent restoration of normal vision are exceedingly seldom met with. With the exception of a frontal headache, my patient was in excellent health at the time the optic neuritis developed, and, as she remained in good health during the next five years, it seems reasonable to assume that the eye disease was not the result of a general affection, which was latent when she became blind.

Case 2.—Amaurosis, probably from Autointoxication—Mrs. S., aged thirty-two, stout, of typical bilious temperament, is subject to frequent attacks of headache; is constipated most of the time; is fond of rich food and indulges freely in eating.

On July 27th, in the evening, was attacked with a sudden intense pain in the head with nausea and vomiting. The attack was so severe that her attending physician was obliged to give her one-quarter grain of morphine hypodermically. She was relieved in about half an hour. Calomel and Warburg's tincture were given next morning, but did not act well. In the evening of this day, at about the same hour as on the previous day, another severe attack of headache came on and another dose of morphine was given her, which gave her some relief.

On the morning of the 29th she was given one ounce of Warburg's tincture, and in the evening she received ten grains of quinine. She had no attack of headache on this day.

On the 30th, in the evening, she had another very severe attack of

headache. In the morning of this day she had taken ten grains of quinine and ten more in the evening. During the night of the 30th she noticed that her vision was becoming impaired, and on the morning of the 31st *she was totally blind in both eyes.* Pupils reacted but feebly to light. I saw her for the first time shortly after noon on this day. She acted like a person who was absolutely blind and was quite self-possessed. I found that the movements of the eyeballs were unimpeded in any direction. She was unable to recognize the position of a lighted candle held but a short distance from her eyes. *The pupils of both eyes responded readily to light and in convergence. The ophthalmoscope showed absolutely normal eye grounds.* In one of her eyes she had a patch of opaque nerve fibres such as is frequently seen in eyes with good vision. There was absolutely nothing hysterical about the woman. I feel very confident that she did not exaggerate her impairment of vision. The hearing was normal. I made a favorable prognosis. *An examination of her urine showed it to have a specific gravity of 1,030; it contained a trace of sugar but no albumin.* The quantity of urine passed during the day preceding the blindness is not accurately known, but it was said to have been of the usual amount. The bowels had not moved freely for some days, although sulphate of magnesia in large doses had been administered at frequent intervals. A high enema was given shortly after I saw her, which brought away a quantity of fecal matter, in which, on examination, were found seeds of berries eaten two weeks before. The total blindness continued for thirty-six hours, and then gradually her vision returned in both eyes. There was no rise in temperature during the attack, but on the day following her temperature rose to 102. A week after the attack her vision was as good as before the attack, and the visual fields were of normal extent for white and colors in all directions. All our efforts to find a cause for the sudden blindness were fruitless. She had no disease of the kidneys. Habitual constipation, for which she was always taking cathartic mineral waters, was about the only abnormal condition which we could discover at the time. She has been in her usual good health ever since. That this was a case of amaurosis from some kind of intoxication there can be no doubt. But as to whether it was due to a poison introduced into the body from without, or whether the poisoning was the result of an inadequate physiologic elimination of the product of the tissue metamorphosis, or of the formation of a

poison in the intestinal tract due to abnormal processes of decomposition or fermentation must remain in doubt. That the poison was not introduced from without seems, however, pretty certain. Neither the food of which she had partaken nor the drugs which had been administered can be held responsible for the eye affection. We know that quinine will occasionally produce blindness even in comparatively small doses, but both the clinical features and the absence of all change in the backgrounds of the eyes, as well as the subsequent history of the case, show that this drug was not the cause of the blindness. The absence of disease of the kidneys probably eliminates uræmia as the cause of the amaurosis, though it must be admitted that this attack closely resembles in all its features the blindness known to occur in this affection. In one of the examinations of the urine a trace of sugar was found, but only once, and none has been found since the attack. With the exception of habitual constipation, there is no evidence of the presence of a morbid affection of the digestive tract, and yet the most plausible explanation seems to me to be that the toxine which caused the amaurosis was formed through putrifactive changes of the contents of the intestinal tract. As to the part of the visual apparatus affected in this case, there can be no doubt. The blindness with prompt pupillary reaction to light established the fact that the optical centres were the seat of the lesion. But as to whether it was an oedema of the meninges or an affection of the brain substance itself, no one can tell. There are very few cases on record similar to the one here described, and in most of these the absence of albumin in the urine was not positively excluded. I am indebted to Dr. Cladek, of Rahway, for notes of the previous history of the case.

To recapitulate.—In both of the cases above reported, the blindness was due to an affection of the nervous visual apparatus. In the first the seat was in the conducting apparatus, as was manifest from the fact that the pupillary light reflex was absent during a part of the time that the blindness existed. In the second the seat of the lesion must be looked for in the optic centres as the pupils reacted promptly to light when total blindness was present. In both cases the vision was completely restored. It is doubtful that the treatment adopted had anything to do with the restoration of the sight in either case.

DISCUSSION.

DR. FRANK FISHER, of Philadelphia.—The presentation of such

papers is of intense interest, both to the specialist and the general practitioner, as all must be interested in the causes of amaurosis. Transient amaurosis is probably due to affections of various tissues. There may be a diseased condition of the rods and cones of the retina, or of the conducting cords back to the optical centres of brain. It is very often impossible to decide the nature of the cause in a case of transient amaurosis. Aside from the cases of lead, alcohol, mercury, phosphorus and ergot poisoning, it is very difficult to determine with any certainty the exact cause. In one of the cases referred to, one naturally thinks of the possibility of quinine poisoning as the cause. In cases of malarial blindness and neuritis, discussion has often arisen as to whether the malaria was the cause, or whether the neuritis was due to the administration of quinine. This matter is still in dispute, and it will probably be long unsettled. Another suggestion from the paper is the possibility of auto-infection, or of infection being the real cause of many of these conditions of amaurosis, temporary or permanent. Possibly there is an underlying dyscrasia or diathesis which has been partially stimulated by alcohol, tobacco or other means. If such is the case, we must largely modify our opinions regarding the blindness following alcoholism and tobacco toxæmia. Dr. Kipp has more strongly suggested to my mind, the possibility of both of the cases reported by him being due to some form of toxic poisoning having stimulated a pre-existing diathesis or dyscrasia.

Acute Inflammation of the Accessory Sinuses of the Nose.

BY NORTON L. WILSON, M. D., ELIZABETH, N. J.

Acute sinusitis has become so frequent of late years, and is so often followed by a chronic condition which necessitates an operation, that I have thought it might be interesting and possibly, of some value, to present to this Society, a brief paper upon the subject.

A correct idea of the topographical anatomy of the sinuses can only be obtained by the study of both dry and wet sections. The most of the plates in our text books representing these sections, are a very poor representation of them as they really exist. The subject, in my opinion, is one of great importance to the general practitioner. To

him the patient first applies for help. Indeed most of the cases which come to me for treatment, are of the sub-acute or chronic variety.

If the acute cases had been properly treated from the first, there would have been a few cases only of chronic character for treatment.

The cure of disease is of invaluable benefit to mankind, but its effective prevention is of far greater importance. We should, therefore, seek to obtain a better understanding of those causes which produce the disease under consideration, if we would the more successfully prevent its occurrence. It is within the knowledge of all who have observed the course of acute sinus inflammation, that severe symptoms may, in many cases, be successfully met and a speedy cure effected, if there be a prompt recognition of the trouble and a treatment which will be immediately effective. In order to prevent the resultant troubles, we should know the various causes to which they owe their origin. These may be either predisposing or exciting.

Dr. D. Bryson Delevan, in his paper read last year at Saratoga, pointed out certain existing causes, which directly pre-dispose to the disease under consideration. "It may not be," he said, "so generally understood, that in many instances, certain causes exist which directly pre-dispose to sinus disease; causes in the presence of which, exciting influences of comparatively little importance in a normal nose may assume dangerous proportions and become the occasion of serious results.

Predisposing Causes.—"Anything which seriously hinders free drainage from the upper half of the nasal cavity, may act as a pre-disposing cause," such as deflection of the septum, catarrhal thickening of the tissues of the upper and middle part of the septum, hypertrophic conditions of the turbinate, and especially the middle turbinate, polypi, congestive conditions of the soft parts, and by that term, I mean an engorged and swollen condition of the mucous membrane, which is not an hypertrophy, the formation of masses of granulation or even the presence of inspisated mucus. Any one of these may be a contributing factor in the cause pre-disposing to the disease. Malformations of this region of the nose are by no means invariably associated with disease of the accessory sinuses. They do, however, predispose to congestive troubles in general, and these in turn render the sinuses more liable to disease. Cases of acute sinus disease without any apparent malformations have, however, come under my observation.

Exciting Causes.—Inflammation and suppuration in the accessory sinuses may arise in the course of certain affections, such as influenza, pneumonia, scarlet fever, measles, typhoid fever, diphtheria, smallpox, cerebro-spinal meningitis and erysipelas.

In regard to the last named disease, the above named author makes this pertinent remark: "It is questionable whether erysipelas may not in many cases be due to pre-existing sinus disease. Numerous instances of recurrent facial erysipelas have been observed in which the erysipelatous attacks have been done away with by the treatment and cure of necrosing ethmoiditis and similar diseased conditions of the accessory sinuses. This was the condition that existed in a case coming under my observation. The patient had had several attacks of facial erysipelas, and a final cure was effected by curetting the anterior ethmoidal cells.

The inflammation may reach the sinuses by direct extension from the nose, fauces and naso-pharynx, or the cavities may become involved through the blood stream in the course of a general systemic infection. This latter mode of infection I believe to be much less frequent than by extension from the nasal cavities.

Among the most frequent exciting causes are influenza and croupous pneumonia. On the occasion of a recent visit to the Massachusetts Eye and Ear Infirmary in Boston, there came under my observation several cases of acute inflammation of the frontal sinuses which accompanied or followed la grippe, and I have found cases resulting from such causes in my own private practice. I believe that to this form of epidemic influenza may be attributed the increase in the number of cases of late years. Weichelbaum, during the epidemic of 1890 found suppuration present in a large number of post-mortem examinations upon influenza patients.

Sinus inflammation may result from acute coryza without influenza infection. Suppuration of the sinuses has been ascribed to the presence of polypi, but I am inclined to think that in most instances the polypi are due to suppurating sinuses—that is to say, the mucous membrane becomes irritated from the constant flow of pus over its surface, and a polypus springs therefrom. Grenwold and others have said that sinusitis is probably the cause of ozœna or atrophic rhinitis. This theory I can not accept, for the reason just stated, namely, the presence of pus causes an hypertrophy rather than an atrophy. I am rather inclined to believe the sinus disease is secondary to the atrophic

rhinitis. We are all familiar with catarrhal and suppurative processes in the middle ear as secondary to atrophic rhinitis, and I fail to recall a single case where the atrophic rhinitis was due to a suppurating ear. Certain it is that in all the acute infections of the sinuses we have an inflammatory condition in the nasal mucous membrane which, if properly treated, gives prompt relief to the existing sinus disease. Dental caries, or operations upon the nasal cavities, or the use of instruments not properly aseptic, or the plugging of the nasal cavities for epistaxis, have caused disease of the antrum. Another prolific cause is to be found in the irritation from dust laden with bacteria. This is no doubt the reason for so many automobilists having diseases of the frontal and ethmoidal cells.

Bacteriology.—To E. Frankel and Wichelbaum we are mainly indebted for the bacteriology of the accessory sinuses. They have found the diplococcus pneumonia, the bacterium coli and a number of pyogenic organisms. The influenza bacillus has been demonstrated by Lindenthal, Howard, Ingalls and Morizkowskie. True diphtheritic membrane has been found in the antrum by Weichelbaum, Frankel, Pearce and others.

Pathology.—In accute inflammations the mucosa becomes congested, infiltrated with round cells and swollen, while a serous exudation is poured out, constituting an acute catarrh of the membrane. The exudation may become sero-purulent or purulent, and if mixed with a quantity of mucus it presents a muco-purulent character. If the ostium of the sinus becomes blocked by the swollen mucous membrane, the exudation is retained under pressure and the clinical symptoms and signs become aggravated.

Diagnosis.—We will be able to diagnose the disease by observing the following manifestations: In every case of acute coryza or influenza and in the exanthemata, we should keep in mind the possibilities of infection of the accessory sinuses. We should remember that the antrum of Highmore, the frontal sinuses and the anterior ethmoidal cells communicate with the nasal chamber through the middle meatus under the middle turbinate bone, while the posterior ethmoidal cells and the sphenoid sinuses open into the superior meatus, that is, above the middle turbinate and under the superior turbinate. Inflammation of the sinuses is usually ushered in with the general malaise attributed to la grippe, the severe bone-ache being generally well marked. In fact, I have seen the diagnosis of la grippe made when it should have been acute inflammation of the accessory sinuses.

Pain is a prominent symptom. It may be in the brow and eyes with photophobia, or there may be tenderness over the antrum. The muscles of the head and neck may be stiff, and not infrequently there is a tendency to mental depression. The symptoms are modified according as the ostium remains open or becomes closed. In the former condition secretions drain away more freely, and a spontaneous cure frequently results, while in the latter there is retention and an aggravation of symptoms. Pain is not always a reliable indication as to which sinus is involved, but clearly indicates that some one sinus is involved.

Tenderness over cheek or forehead may be elicited upon slight pressure. The discharge varies in character. It is sometimes a straw-colored fluid, or blood stained, or muco-purulent. A free flow of the secretions is followed by cessation of symptoms. A stoppage of discharge increases the symptoms. The alternation in character of symptoms is very suggestive of sinusitis. The mucous membrane is red and swollen and the turbinates turgescent. If the middle turbinate is contracted with adrenalin, there will probably be found some discharge flowing from the middle meatus, which may be increased by inclining the head forward. The pulse is not much quickened and the temperature is raised but little.

Transillumination.—Transillumination is not infallible, although it is of value in many cases. It may be interesting to know that this method of diagnosis was first demonstrated in 1885, by Dr. Hewson, of Philadelphia, and not by the medical profession of Europe. For this statement I have the authority of Dr. B. A. Randall. The clouding in transillumination is not due to the presence of pus, but to the thickened mucosa or serum-filled tissues. If best results are to be obtained by this method, it should be used in a dark room with the electric light up to its full candle power. In cases of acute coryza, with severe frontal pain, we may expect to find frontal sinus or anterior ethmoidal inflammation.

If the pain is in the cheek there is a probability of antral disease, or if it be of a boring character deeper in the head, there is an indication of posterior ethmoidal or sphenoidal inflammation. I have never seen a case of acute sinus inflammation without pain, but I have seen severe chronic cases with no pain.

Treatment.—As to the method of treatment, let me repeat that it is the first duty of every physician to prevent disease. In these very

cases where serious consequences may be avoided if the physician will recognize the importance of a severe coryza and treat it both internally and locally, and not allow the much despised "cold in the head" to go untreated and get well as best it may. Here he may find the opportunity to discharge that duty. There is no doubt that from a lack of effort to prevent disease is due a large number of the chronic sinus disease.

The principles of treatment applied in these cases are based upon the ordinary rules of caring for a cold in the head. The first, and in my opinion one of the most important steps in the treatment of these acute inflammations, is to order the patient to bed and the enjoining of absolute quiet. This should be followed by securing thorough relaxation and diaphoresis by means of a hot bath, the frequent drinking of water or hot lemonade containing acetate or citrate of potash; the application of hot cloths to the head and the administration of calomel in one-quarter grain doses every hour until a full grain has been taken; this to be followed by a saline cathartic. After the bowels and skin are active, the ice bag to the head may replace the hot cloths, and the administration of atrophine should be instituted.

The rhinitis tablet which contains camphor, atropine and quinine acts very well. It should be given until the mucous membrane of the nose and mouth become somewhat dry or the face is flushed or the pupils dilated.

Belladonna seems to have a selective action upon the mucous membrane lining the nose and sinuses. By its use we certainly are often enabled to abort a coryza or a sinusitis. Locally, free drainage and thorough cleansing of the parts can be effected by a warm spray of Dobell's or Siler's solution and the application of adrenalin solution (℥ i ss to oz.), either on pledgets of cotton or by gently spraying into the nostril, followed by a light spray of menthol, camphor and liquid vaseline, if the latter does not produce sneezing. The use of cocaine in the acute cases is objectionable because of its toxic effect and because of the secondary swelling of the turbinates which follows after the effect of the cocaine disappears.

If the case goes on to suppuration and is not relieved by the above treatment, it may be necessary to wash out the sinuses with a warm saline or boric acid solution or a solution of creolin. When suppuration is present, cocain and adrenalin should be used to facilitate the introduction of the catheter. If it be impossible to wash out the

antrum after removal of the anterior portion of the middle turbinate, a trocar should be plunged into the antrum through the nasal wall, under the inferior turbinate. The bone is here thin and may be easily punctured. The cleansing fluid should be forced in until it escapes from beneath the middle turbinate. It will be found that a few washings usually suffice, unless thickening with granulation has already taken place. The bleeding which occurs from a turbinotomy is of decided value in lessening the congestion of the parts. While I have never seen death occur directly from the acute infection, I have seen it occur as the result of the chronic inflammation.

In conclusion, permit me to say that not a few of this class of cases will recover without treatment, but that does not excuse us for not recognizing the condition and satisfying ourselves that the patient is put in the best possible position for recovery.

DISCUSSION.

DR. GEORGE E. READING, of Woodbury.—I wish to add one point with regard to the treatment. Dr. Wilson has recommended belladonna very highly, and while seconding this, I would say that if aconite is added to the belladonna the result it better, and it is less likely to be associated with unpleasant symptoms arising from the action of the belladonna. My attention was called to this combination a number of years ago in connection with middle ear disease. This led me to use it in all acute catarrhal conditions of the air passages, and I have found it capable of giving much better results than belladonna alone.

SURGICAL INTERFERENCE IN ABDOMINAL CONTUSIONS.

BY EDWARD A. Y. SCHELLENGER, M. D., CAMDEN, N. J.

Many of us have seen death follow contusions of the abdomen; whether the contusions were caused by blows, kicks, or the passage of heavy bodies, such as vehicles, over the abdomen. The surface gives us, in many instances, but meagre information, and it is only the autopsy that reveals rupture of the bowels or tear of the mesentery, etc.

At such a post-mortem the surgeon asks himself: "Why did not I operate?" but he is liable to halt again and again before similar cases.

The abdominal walls may be but slightly injured, and yet the

gravest internal lesions may co-exist. Despite the fact that there are practically no surface indications of injury of the internal organs, in the majority of cases we find alarming symptoms, *i. e.*, such as agonizing pain in the region of the injury, restlessness, nausea or vomiting, marked prostration, rapid and irregular pulse, pallor, cold sweats and rigidity of abdominal walls. The surgeon is called upon to decide in such cases, and to decide without delay, for or against laparotomy.

In this class of cases an operation at once performed may save a life, while a delay of twelve or twenty-four hours renders such an operation of no value.

There are certain symptoms which, to my mind, indicate an immediate exploratory incision.

It is my opinion that where a diffused rigidity of the abdominal wall is found, even in the absence of any other serious symptom, we are warranted in at once performing laparotomy.

Hartmann reports ten cases of this kind, all operated upon, with nine recoveries. In seventeen cases where this sign was absent no operation was deemed necessary and all recovered. So here we have a symptom which cannot be passed by, and by which, if we follow its guidance, we may certainly save a few otherwise hopeless cases.

The vomiting following these injuries varies from mere nausea to the most violent expulsive efforts. Vomited matter may contain blood. Constant and persistent vomiting tends to indicate visceral injury.

The degree of shock depends especially upon the amount of blood lost; therefore if the signs of collapse gradually become more marked internal hemorrhage is to be feared.

The pulse is usually rapid and weak; an unfavorable symptom is rapidity of pulse and increased tension.

Fowler (*N. Y. Medical Journal*) says after an abdominal injury if there is tenderness, acceleration of the pulse tending to increase ever so slightly, together with abdominal distension, the diagnosis of grave injury is absolute.

The size of the instrument which caused the injury is an important factor in establishing a diagnosis. Lesions of the digestive tract are most frequently the result of sudden and violent percussion produced by some body over a limited surface of the abdominal wall.

The predisposing factors are the presence of solid, semi-solid or

fluid matter in the hollow viscera; leanness of the individual and intestinal adhesions. These conditions being present, rupture of some portion of the gastro-intestinal tract is likely. And when there is loss of consciousness at the time of the accident followed by a collapse, severe pain, rapid and weak pulse, vomiting and rigidity of the abdominal walls, laparotomy is unquestionably called for.

In some confusing and perplexing cases we get a history of an abdominal injury either from kicks or blows or the like in which we find only slight pain, some or no shock, pulse a little above normal, slight nausea and slight rigidity of the abdominal walls. It is such cases as these that demand our most vigilant watchfulness; and when in three or four hours we find the pulse weakening, or vomiting becoming persistent, or diffused rigidity of the abdominal walls, I believe laparotomy is the only sane method of treatment.

I recall two cases of my own in which, if the above line of treatment had been followed, the patients would undoubtedly have been saved.

A. B., a young man aged twenty-seven, was struck in the upper portion of the abdomen by the handle of a brake-wheel on a trolley car. At the time he experienced some pain and a sick stomach, but was able to run his car two or three miles. The pain becoming severe, with vomiting, he was taken home. An examination made about three hours after the injury revealed localized pain, weak pulse, a temperature of 100° F., some rigidity, with vomiting. Four hours later I saw him again. The pain had increased, the vomiting was constant, and the rigidity marked. I delayed operating although the three symptoms which I now lay so much stress upon were present, viz., abdominal rigidity, constant and persistent vomiting and an accelerated pulse tending to increase. I determined to operate the next morning, but his condition was such that anæsthesia meant certain death. He died at 2 P. M. Post-mortem disclosed blood and fecal matter in the peritoneal cavity and two perforations of the small intestine.

The second case, C. D., a man aged forty-three, was struck in the abdomen by a piece of wood hurled from a revolving fly-wheel. Severe pain following the patient fainted, but in a short time he was able to walk some eight blocks to the hospital. An examination revealed no external lesion, very little tenderness and no rigidity. His pulse was 82 and his temperature 97.3 F. This was in the morn-

ing. He was put to bed. At 5:30 in the afternoon I saw him again. Found a pulse of 108, marked tenderness, tympanitis, persistent vomiting but not constant, with rigidity of the abdominal walls. The following day these unfavorable symptoms were increased. I operated and found rent in small intestine. Patient returned to bed collapsed, and died six hours after the operation. I believe that an exploratory incision made early would have saved his life.

Murphy (Chicago) considers hyperæsthesia of the abdomen with respiration of 28 or 30 with nausea an absolute indication for operation. As an example, a man was struck in the abdomen while running a board through a planer. Intense pain followed with vomiting. On removal to hospital hyperæsthesia of the belly walls was found with nausea, vomiting having ceased, and a rapid pulse. Was operated on two hours after the injury. Found abdomen full of blood, rent in under surface of liver and rupture of small intestine. The perforation of intestine was closed, the laceration of the liver was packed with iodiform gauze, and patient was put to bed in a serious condition. Intravenous injection of salt solution and stimulants were given and the patient entirely recovered. In this case delay would unquestionably have been fatal.

Permit me to remark in closing, that in the light of our present knowledge, it can hardly be questioned that cases showing by their symptoms, as indicated above, a grave injury, ought to be submitted to surgical measures as early as possible. Only a positive conclusion based on every means of diagnosis available will warrant the assumption that no serious injury is present, but where doubt exists, abdominal section alone is capable of insuring the patient adequate protection.

If such section reveals but slight injury, no harm will have been done; but if lesions of the organ be found, or serious hemorrhage be discovered and properly dealt with, the patient will have received the benefit of all our professional resources.

CORNEAL ULCERATION DUE TO NASAL INFECTION.

BY S. LEWIS ZIEGLER, M. D.,

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The micro-organisms generated in the nasal cavities and accessory sinuses of the head have been gradually assuming their proper importance as pathogenic factors in ocular disease for more than a decade

past. Ziem[1], in his admirable monograph, states his belief that "two-thirds of all cases of ocular disease arise from nasal disturbances." The writer[2], in a paper presented some nine years ago, made the following statement: "I think we may safely say that fully ninety per cent. of corneal lesions take their origin directly from pre-existent pathological processes affecting the intra-nasal tissues and secretions. Careful inspection will almost invariably reveal associated lesions of the eye and nostril of the same side, which is most markedly shown where the disturbance is confined to a single eye and the corresponding nostril."

There are three different avenues for the transmission of disease from the nose to the eye—(1) by the lacrymo-nasal duct, (2) by the blood and lymph streams, and (3) by reflex action through the nervous system. Although bacterial invasion has been traced through the blood and lymphatic circulation, we will only consider their transmission through the lacrymo-nasal canal. In order to still further limit our discussion, we will confine our attention to *ulcerative* lesions of the cornea.

The cornea is probably the most vulnerable tissue of the eye, owing to its anterior location and its consequent exposure to traumatism and infection. Any inflammation of the corneal substance may so affect its transparency that vision may be partially impaired, or even lost, especially where the resulting opacity is centrally located. Such lesions should, therefore, receive early recognition, and have efficient treatment promptly applied, in order that any disturbance of the visual acuity may be prevented.

For our present purposes, corneal ulcerations may be subdivided into three varieties, the simple, phlyctenular and sloughing.

Simple corneal ulcer appears as a small gray or grayish white lesion of the corneal surface, accompanied with pericorneal injection. Phlyctenular ulceration manifests itself as a pustule or vesicle, to which is attached a narrow leash of blood vessels. Either of these varieties may become suppurative in character, or even result in perforation of the cornea, if proper treatment is not promptly instituted.

Accompanying these local symptoms is a characteristic clinical picture that cannot fail to indicate the diagnosis. There is intense photophobia, which the child attempts to alleviate by burying its head in a pillow or in the folds of its mother's dress. There is marked blepharospasm, the lids being gripped together so tightly that it is

almost impossible to open them. Lacrymation is often excessive, and occasionally a muco-purulent discharge is present. The nasal secretions are viscid, acrid and irritating, often hanging down on the lip and causing eczematous excoriation. Occasionally the face is covered with an acneous eruption, and the skin of the whole body appears ashy-pale, relaxed and leaky, being bathed in perspiration, while the hair is matted together by the excessive moisture present. In cold weather the perspiration and chilliness of the body surface leads to excessive zeal in overdressing, which only adds to the existing trouble.

Sloughing ulcer usually arises in two ways, (1) from some small wound of the cornea, which is either infected by some germ-deposit carried on the foreign body itself, or, more frequently, by the excessive bacterial growth occurring in the tear-duct; and (2) it may also occur in the course of the exanthemata or other fevers, (*a*) by infection with excessively virulent bacteria, following maceration and lesion of the corneal surface through acrid secretions, and (*b*) by actual local pustulation. The rapid break-down of the cornea, the wide extent of the ulceration, the muco-purulent discharge, and the extreme physical prostration of the patient will promptly indicate the more serious character of this lesion.

The pyogenic germs may penetrate the corneal layers before there is actual perforation, and cause what is termed hypopyon, or pus in the anterior chamber. In the simple or phlyctenular ulcer this material will be promptly reabsorbed; but in the sloughing variety a more serious infection may result.

The nasal etiology of these corneal lesions involves many factors. The inspired air carries into the vestibular air chambers innumerable spores, many of which are retained and undergo fermentation, because of the essential elements of heat and moisture present. The accessory cavities furnish in still greater degree these fermentative possibilities. If, then, their mucus contents become infected by these invading organisms, almost unlimited multiplication will occur. So long as the secretions can escape freely, the bacteria are washed out by the flux. When, however, partial or complete occlusion of the sinus orifice occurs, a veritable bacterial pest-house or breeding ground for germs is thereby established.

The accessory cavity that is chiefly involved in these processes is the maxillary sinus or antrum of Highmore. Its location, its ease of obstruction, and its anatomical conformation as a pear-shaped sac

with a superior opening (thereby permitting retention of all fluids except the overflow), all tend to make this cavity what is practically a semi-closed cess-pool filled with the pathologic products of decomposition and fermentation. We must agree with Bosworth[8] when he says that "it is an invariable rule that a catarrhal secretion in a closed cavity must give rise, sooner or later, to a purulent discharge."

The mucous membrane composing the orifice and the canal, which is the means of exit from the antrum, is oftentimes tortuous in its passage through the bone; it may be loosely adherent and thrown up in folds; it may be unusually susceptible to vascular dilatation and engorgement; or it may be easily irritated by the outflow of acrid secretions. Atmospheric humidity and low barometric pressure may cause venous stasis. Hyperesthesia of the Schneiderian membrane; the irritation set up by contact of the intra-nasal mucous surfaces themselves; the local irritation of particles inhaled in breathing; the influence of heat and cold, either local or systemic—one or all of these conditions present will quickly demonstrate how easily this small canal may become partially or wholly occluded, thus shutting off the antral cavity.

The mucous membrane lining the antrum is likewise subject to certain pathologic changes. There may be simple hyperemia with hypersecretion due to chilling of the surface of the body. If this chilling suddenly checks perspiration, the normal amount of urea excreted by the mucous membrane of the antrum is considerably augmented by the vicarious action which it assumes in order to help eliminate the excess of urea in the system. The congestion and closure of the antral orifice creates, therefore, what is practically a cyst or bladder, and we have set up by means of the bacterium urea, a pathologic process which is a pure analogue of cystitis as it occurs in the urinary bladder, and which will run a similar course. The urea, through a bio-chemic action, changes into ammonium or ammonium carbonate, both of which are intensely irritating to the mucous lining of the cavity, and at the same time the excessive alkalinity coagulates the mucus contained therein. The fluid serum continues to be secreted, and thus the coagulated mucus rises to the upper portion of the chamber, and because so coagulated is extruded into the nasal cavity with difficulty.

If, now, we concede an infectious cystitis of the antrum, we can comprehend how it is possible for an unlimited stream of pathogenic

micro-organisms to be poured out onto the cup-like floor of the nasal chamber, and by capillary attraction drawn up into the lacrymo-nasal duct, and thence to the ocular cul-de-sac.

The lacrymo-nasal duct itself is, moreover, a most fertile nidus for this bacterial development. The presence of strictures, viscid secretions, ulceration of the lining membrane, or interstitial thickening of the same, all tend to interfere with its syphonic action in the downward drainage of the tears. The bacterial growth is greatly facilitated by the consequent stagnation. Not only are the tears prevented from passing into the nose, but microbic infection is carried upward to the eye by the regurgitation of these septic secretions.

Whether the actual break in the corneal epithelium is due to the maceration caused by this acrid alkaline fluid, or whether there is a direct erosion due to adhesion of the bacterial colony is immaterial. We believe that both pathologic processes are possible. Of course, corneal abrasion by direct traumatism is always a possibility. The friction of rough granular lids may thus become a causative factor.

The micro-organisms that have been most frequently found in these conditions are the pneumococcus, the staphylococcus, and the Klebs-Loeffler bacillus, while the streptococcus and the gonococcus of Neisser are more infrequent factors of infection.

We must not overlook the fact that there is a constitutional element in the disturbance—chronic constipation, errors in diet, poor food, and unhygienic habits are important factors to be considered. Nasal obstruction and mouth breathing are especially deleterious, because orally inspired air cannot evaporate intra-nasal fluids, and because lowered oxidation and metabolism almost invariably results.

In children the exanthemata are immediately or remotely responsible for many of these conditions, while teething is often a causative agent. In hospital work, however, I have found the most unvarying genetic factor to be *over-indulgence in coffee, tea and sweets.* They sap the vitality and create a peculiar gastro-intestinal irritability that is hard to overcome, and which reflexly adds to the nasal disturbance. When taken in excess they overload with Xanthin compounds an already weakened system, and like alcoholic excesses, inhibit proper elimination of the system's waste, thus resulting in what is practically katabolic stasis.

Having thus briefly reviewed the etiology of this disease, we may properly characterize corneal ulcer as a purely local inflammatory

process, arising chiefly from infection by septic lacrymo-nasal secretions, and frequently complicated by lowered oxidation and metabolism.

TREATMENT.

The Nose.—The nasal origin of this affection indicates the treatment to be applied. Irrigation of the nasal chambers with an antiseptic or saline solution should be carefully carried out. If pus is present, hydrogen peroxide (diluted 1 to 4) should be dropped into the nostril by the ordinary eye-dropper, two or three times a day, and allowed to trickle back into the throat.

Local applications for the reduction of the turgescent mucous membranes are often necessary. A weak solution of cocaine (1 to 2%) may be applied with cotton wrapped on a wire applicator. This may be followed by an application of—

℞ Camphor. ....
Menthol ..... āā gr. x
Tr. Benzoin Comp ..... f℥ij
Boroglyceridi (50%)..... q. s. ad f℥j

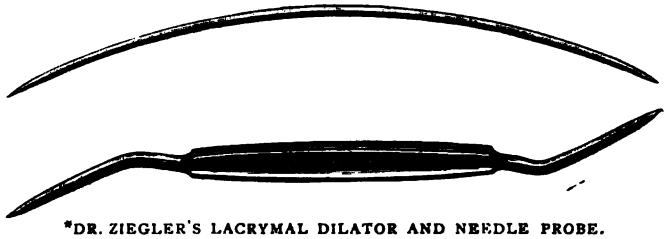
M. et Sig. Apply to nose daily, or on alternate days.

If any more serious naso-pharyngeal lesion is present the patient should be promptly referred to the rhinologist for relief. Enlarged tonsils or adenoid vegetations in the pharynx, and septal spurs, polypus or other nasal growth should have surgical attention. If the ocular condition has become chronic it may be necessary to reduce the hypertrophied and turgescent inferior turbinates by galvano-cauterization. The object to be accomplished by such a procedure is threefold—to promote free antral drainage, to secure freedom from pressure contact, and to obtain free nasal breathing.

The Tear Duct.—The lacrymo-nasal duct may be active or passive in the transmission of germs. It may contain septic secretions without a show of pus, and the amount escaping through the puncta into the eye may be so small as to be practically invisible. If the nasal swelling is reduced, the turgid condition around the valve of Hasner will be lessened, and the secretions will have a natural downward drainage. Ocular irrigation may aid this somewhat. Pressure on the membranous duct will often empty its contents. The small canula of a lacrymal syringe may be introduced into the puncta and very gentle irrigation attempted. If these measures fail it is evident that a patu-

lous tear-duct must be secured either by incision or by rapid dilatation. Such surgical intervention naturally demands the services of the ophthalmic surgeon.

As incision of the tissues often leads to cicatricial contraction, I prefer the method of rapid dilatation without incision, which I have practiced for some fourteen years past. This is done by first introducing a needle-probe into the lacrymal puncta and passing it through the previously stretched membranous canal to the bone. It is then withdrawn and my conical dilator with a maximum size of a No. 10 probe is passed through the membranous canal, and thence, by gentle force, through the bony canal into the nose.



*DR. ZIEGLER'S LACRYMAL DILATOR AND NEEDLE PROBE.

While the general shape of the dilator is conical, it is rounded or bellied just above the point, which allows it to dilate so rapidly that the point does not engage, and the dilator never becomes wedged as with a simple cone. The needle-probe has the same quick expansion just back of the point, which is sharper than that of the dilator.

The advantages of this method are the avoidance of cicatricial contraction about the lacrymal puncta, and the preservation of capillarity and syphonic action, thus directing the current of lacrymal drainage toward the nasal orifice. A repetition of this procedure is seldom required.

Where, however, blenorrhea of the sac, lacrymal abscess or marked caries is present, incision should be promptly made, rapid dilatation performed, and a lead style inserted. This should remain for one week, and be followed by lacrymal irrigation.

In very exceptional cases of corneal infection it may be necessary to prevent the regurgitation of these septic secretions by sealing up the lacrymal puncta with the galvano-cautery point, or with a crossed suture.

*Made by Ferguson, and by Schneyder and Allen Co. in Philadelphia, and by Meyrowitz in New York.

The Eye.—In simple and phlyctenular ulceration of the cornea the treatment to be employed is somewhat similar. A mild soothing lotion should be freely applied to the eye, consisting of

℞ Sodii Biborat..... .. ....gr.v
Ac. Boric.....gr.x
Aq. Rosæ.....
Aq. Destillat..... ....āa. f℥j
M. et Sig. Drop in the eye freely, four times a day.

If the iris is at all sluggish atropia should be instilled. If the pupil dilates freely its further use should depend on circumstances. Calomel, or iodoform with compound stearate of zinc, may be insufflated or used in an ointment. Hot stupes for ten minutes three times a day may be beneficial. A pressure bandage is occasionally useful, but should be closely watched as the added warmth may increase the bacterial growth.

Argyrol, in strengths of from 10 to 20%, will prove beneficial, both by its antiseptic action on the ulcer itself, and also by its sedative action on the congested conjunctiva. The staining it causes is only temporary, as it is perfectly soluble in water. It possesses the important advantage of causing neither pain nor irritation.

Sloughing ulcer will require more vigorous treatment. The eye-lotion previously mentioned, or bichloride solution, 1 to 8,000, should be used freely every hour or two. Ice compresses should be applied continuously day and night. Atropia should be instilled three times a day. Iodoform may be dusted in, or used as an ointment.

If the ulcer tends to spread, cauterization by the galvano-cautery or by carbolic acid may be employed. I prefer, however, a 1% solution of formalin, which is applied daily, under cocaine anæsthesia. A small bit of cotton is wrapped tightly on the end of a wire applicator. Dip this into the solution, wipe off all excess, and rub lightly but carefully over the ulcerated surface. The healthy tissue should not be touched as some pain and irritation may result. The formalin method has this double advantage; it does not destroy corneal tissue, and it prevents or clears up a great part of the opacity which is so liable to result. It must, however, be used with great care.

The System.—The general treatment should be dietetic, hygienic, and tonic.

Errors of diet should be at once corrected. Coffee probably causes the most harm, although sweets are undoubtedly a close second. My invariable formula for children is "*no tea, no coffee, no cakes and no candy.*" Salt water baths with friction, followed by an alcohol sponging will tone up the relaxed skin. Proper physical exercise will promote oxidation. The bowels should be carefully regulated. A one grain tablet of cascara every night may prove useful. The granular phosphate of soda is a saline aperient, corrective and cholagogue, and especially valuable for children. Calomel is both antiphlogistic and a stimulant to the dormant lymphatic system. The syrup of the iodide of iron is frequently indicated. Where there is debility or prostration, milk punch will revive the vital forces. The following tonic mixture has proved its usefulness:—

℞ Hydrarg. Bichlor. ....gr.j
Liq. Pot. Ars.....f℥ij
Tr. Ferri Chlor..... ... ...f℥iv
Ac. Phosph. Dil.....f℥j
Syr. Limonis..... .....q. s. ad f℥iv

M. et Sig. Take a quarter to one teaspoonful in water after each meal. (Dose according to age.)

To briefly eptomize the treatment:

1. The nose should have antiseptic irrigation and local treatment applied.

2 The lacrymo-nasal duct should be disinfected or dilated.

3. The eye should have a soothing lotion, a mydriatic instilled, and a cauterant applied to the ulcer if necessary.

4. The diet should be regulated, tonic and antiphlogistic treatment given, and the hygiene generally improved.

1. Mon. f. Ohr., 1893, Nos. 8 and 9.
2. N. Y. Med. Jour., Nov. 3, 1894.
3. Diseases of the Nose and Throat. Vol. 1, page 466.

DISCUSSION.

DR. W. P. EAGLETON, of Newark.—While it has long ago been pointed out that 90 per cent. of corneal ulcers are associated with nasal lesions, but it has not been demonstrated that the ulcers are due to the nasal lesions. The advisability of dilating the duct will depend upon whether it is closed or not. Where there is pus coming from the duct there is no doubt that dilatation is called for, but if

there is no closure of the duct such heroic treatment may do more harm than good. It has been my experience to see very severe lachrymal abscesses follow dilatation of the nasal duct, thereby giving the patient a more serious and painful trouble than before. To determine whether or not the duct is patulous, I have found it useful to apply to the conjunctival sac a drop of solution of fluorescein. If the duct is pervious, the discolored tears are carried down into the nose. In two or three minutes the patient blows the nose, and the discolored tears are found in the nasal secretion, thus demonstrating that the duct is open. In a few cases in which I have tried this method it has been found very satisfactory, and its employment will often make the heroic measures advocated in the paper unnecessary.

Court Testimony of Medical Experts in Mental Diseases.

BY B. D. EVANS, M. D., MORRIS PLAINS, N. J.,

MEDICAL DIRECTOR OF THE NEW JERSEY STATE HOSPITAL AT MORRIS PLAINS.

In carrying out the ends of justice, complex and abstruse problems present themselves. The judges of our courts are supposed to be well versed in law in its general application, but no jurist can be conversant with its special applications to the various sciences, arts, professions and callings; for such a knowledge would mean that to be a competent judge of the courts one would be required to have expert knowledge of every department of human activity. The limitations of the human intellect are such as to clearly render this an impossibility. When one man masters his profession, or even a particular branch of his profession, he has labored well, and has accomplished that which entitles him to have his name enrolled in the galleries of the world's great men, and we honor him, and speak of him as an authority, distinguished, eminent, or famous. It is, then, clear that the calling of experts, or specialists, before our courts of justice is not only expedient but highly necessary for the elucidation of complex questions arising in the domain of the various sciences, arts and professions.

The specialist in mental derangements is called into court as a rule where there is a question as to criminal responsibility, testamentary

capacity or contractual capacity. This summed up means that he is called as an analyzer and elucidator of nearly every relation one human being may have to another. Upon the expert in mental diseases there rests the responsibility of weighing acts, normal and abnormal, of dealing with questions and qualities tangible and intangible. Upon his power of analysis and discrimination often hangs human life, liberty, happiness and the distribution of property. He is not simply an expert in diseased processes incident to mental derangement, but must judge of the soundness of mental operations as exhibited by the subject's words and acts as well as the full scope and bearing such words and acts may have. It is, therefore, plain that however wide the field of mental operations, and into whatever departments of human action the subject may have played his part, the expert, to do his full duty, must analytically sum up his entire life, and even look into the nervous make-up of generations before him, who may have transmitted to him a neurotic taint.

All the factors which have been prominent in the make-up of his intellectuality must be considered; his associations, occupation or profession, and the qualifications necessary for such occupation or profession. So that to analyze the qualities, qualifications and quantities involved, and discriminate as to the proprieties and improprieties, to determine which acts are in harmony with one's education, associations, opportunities and temperament, calls for more than a knowledge of the pathological findings characteristic of certain forms of mental diseases.

The object of introducing expert testimony into court proceedings should always be to make clear scientific points relating to the question at issue, and thus promote the best principles for the government of society and the protection of life and property. But the application of justice and equity to the principles of medicine is a vastly different problem from that of applying the principles of medicine to the requirements of law.

Medicine is progressive. It does not to-day depend on the dogmas and theories of the middle ages; it does not hang even to the theories of the last decade, but accepts that which is proven to be the soundest and best after being subjected to scientific scrutiny and careful analysis. No great authority of the past is allowed to retard the investigations of to-day, or to interfere with the progressive strides which are being made through scientific research in the interests of humanity.

In our courts of law we hear of conservatism, and in many important cases before a decision can be reached or verdict given there must be a precedent found; it matters not how mouldy with age this precedent happens to be, it is necessary and must be forthcoming from some source. If none can be found under recent statutes, then resort is made to the common law as expounded by some jurist who wore the wig and gown, which are supposed to give sufficient force and dignity to his rulings, though an analysis fails to show them either erudite or profound.

With due respect for the so-called conservatism of the law and high regard for the calm, deliberate methods followed by our courts, we still query as to how substantial progress can be made in rulings relative to the criminal responsibility of the insane so long as there are no means of getting loose from precedents and establishing tests in accordance with medical truths.

New Jersey courts generally still hold that if the prisoner knows "the difference between the right and wrong of the act committed," that he is criminally responsible in the sight of the law. If this established ruling be the precedent upon which all future cases are to be decided, then progress is out of the question. Revelations in medicine, surgery, physiology and pathology can not change this fixed proposition, and the wheels of justice are destined to run in one fixed track.

What is the proper course for the insanity expert? Shall he try to make medical facts fit the demands of exploded and illogical legal dicta? or shall he day by day strive by educational methods to make plain that his legal brother in some particulars is a veritable Rip Van Winkle, and that during his long sleep there has been steady progress in the world, and that intelligent research has shed much light upon what is known as the responsibity of the insane as viewed from the standpoint of justice and humanity.

Medical jurisprudence was first taught in England in the sixteenth century. Sir Matthew Hale (born 1609, died 1676), whose decisions are still referred to by the courts, indulged in gross superstitions, and in support of some of them said: "There were such creatures as witches he made no doubt at all; for the Scriptures affirm as much; the wisdom of all nations had provided laws against such persons, which is argument of their belief in such a crime."

I do not feel at liberty to encumber this paper with a large number

of quotations, or the citation of the numerous court cases with which I have been connected as a medical expert in New Jersey, New York and other States, but I trust I may have your indulgence in making a few select quotations which will in a measure set forth the lack of uniformity of eminent jurists, both in their knowledge of the medico-legal aspect of insanity and their appreciation of the medical expert.

"Lord Chancellor Westbury, in the House of Lords, declared on the 11th day of March, 1862, that the introduction of medical opinions and medical theories into this subject has proceeded upon the vicious principle of considering insanity a disease."

"Justice Doe, of New Hampshire, in the case of the State vs. Pike, said: "The legal profession, in profound ignorance of mental disease, have assailed the superintendents of asylums, who knew all that was known on the subject, and to whom the world owes an incalculable debt, as visionary theorists and sentimental philosophers attempting to overturn settled principles of law, whereas, in fact, the legal profession were invading the province of medicine and attempting to install old, exploded medical theories in the place of facts established in the progress of scientific knowledge."

In 1860, the prisoner pleaded guilty, and Baron Bramwell, addressing him, said: "That you are of unsound mind I believe, but that is no reason why you should not be punished. I address the explanation of the reasons why I pass upon you the sentence which I am about to pronounce not so much to your understanding as to those around who hear me, and to those whose duty it is to notice them. The law makes unsoundness of mind no excuse for offences, except it were such that you did not at the same time know the nature of what you were doing, and that it was wrong and unlawful. No doubt it is very unfortunate that persons of unsound mind should become by that affliction less under the influence of moral restraints and of restraints of law, but it would be sad indeed for the public if when those restraints are weakened, the protection of the law were to be withdrawn by the extension of impunity to crime. I am not sure that it is not more necessary to punish a madman than a sane man, so far as the protection of the public is concerned. I feel bound to sentence you to the same punishment as if you were sane."

The Hon. Charles Doe, Chief Justice Supreme Court of New Hampshire, says in a letter to the Hon. Clark Bull, of New York City: "State v. Pike, to which you refer, was decided twenty years ago next

June. During that time I have looked in vain for a noticeable attempt to show error in the New Hampshire law on the subject of legal tests of insanity. There have been decisions affirming the old test of knowledge of right and wrong in criminal cases. It has been said that in some cases insanity ought not to be a defense. It has been said in substance that the New Hampshire rule is impolitic and dangerous; that if insanity causes a man to do something which he knows to be wrong, and which would be criminal if he were sane, he should be punished for his mental disease.

"Many things have been said, but since the decision in the State v. Pike was published, I have seen nothing that can be regarded as a serious effort to grapple with the argument of the common law question, and show error in the New Hampshire rule. If any effort of that kind entitled to a moment's consideration in the judgment of a good common law lawyer, has been made since the publication of State v. Pike it has escaped my observation.

"I do not suggest that the legal argument in that case is unanswerable. It may deserve no answer. It may be beneath the notice of sound lawyers. I merely ask if you are aware of, or can you find anything, that a sound lawyer would regard as an answer worthy of consideration. If you can find anything of the kind, would it be well to ask your readers why those who reject the New Hampshire rule have allowed twenty years to pass without making any noteworthy attempt to expose the error of it, or to attack it upon any ground of common law principle. The grounds of that rule are distinctly set forth in our decisions, and are in every library used by the judges and the leading lawyers of this country.

"If those grounds are too feeble to deserve an answer, let them go. If their feebleness will not consign them to oblivion, why has not somebody taken them up fairly, met them fully and squarely, and demonstrated their unsoundness by common law argument addressed to the legal intelligence of the country? Why don't somebody assume that easy task now? How long will it be before the candid minds of the profession will demand a satisfactory answer to these questions? Such minds are not swayed by superficial or general allusions or mere assertions. They insist upon argument, solid, thorough and profound, going to the bottom of the subject, free from cavil and sophistry, shunning no difficulty and misrepresenting no position of an adversary. I merely suggest in the course of your

writing on the subject, an appeal, perhaps in the interrogative form, to the candor of the legal profession for an explanation of the fact that twenty years have passed without any material answer being made to the New Hampshire argument on the common law question."

Sir Edward Coke said: "To execute an insane person is against law and of extreme inhumanity and cruelty, and can be no warning to others."

Mr. Justice Tracy said: To relieve from responsibility, insanity must be absolute; a man must know no more than an infant or a wild beast."

Chief Justice Bardsley ruled that "absolute insanity is not necessary, if the person was insane with reference to the crime charged, it was sufficient."

So we might go on *ad infinitum* with decisions bordering on the grotesque; rulings of distinguished jurists conflicting on cardinal points, and all in the sacred name of the law.

When medical experts differ, our legal brethren seem almost to scorn a profession in which there is no greater harmony of thought. The press having been represented at the trial by an expert in shorthand, publishes his criticism of the alienist in large, showy headlines, and at the corner grocery store, the critics there assembled say: "These doctors can't agree among themselves."

The rulings of the courts are public acts and go upon record, and naturally, there is a certain pride felt in them, and once subscribed to, a recession from them calls for a sacrifice of dignity. But what physician of to-day would be bound in his treatment of disease by the dicta of Hippocrates, Galen or even the illustrious Sydenham?

As a specialist in mental diseases, I claim that our courts can best serve the ends of justice by making a conscientious application of law to the principles of medicine as they are now, and not as they were believed to be by the legal profession centuries ago.

We, as alienists, contend that when a delusion dominates a person so that he is unable to get away from its imperative force, he is "as a piece of clay in the hands of a potter," he is, because of this delusion, no longer a volitional being, but as a result of the false belief evolved and elaborated through disease, he is helpless and irresponsible.

That medical men of marked ability should differ as to details relating to mental alienation, is natural and reasonable; for medicine,

taken as a whole, like law, is not, strictly speaking, a science, but an art of the highest order.

It is well known that great men in military strategy, naval problems, architecture, sculpture, astronomy, political economy and even mathematics have held to radically different opinions upon the same great problems, and yet have gone down in history as men of great merit, sincerity of purpose and promoters of the world's best interests.

The medical expert should always keep in mind that he is a member of the noblest of professions, and that when called as a witness in his specialty, he is not present as an advocate. He should always keep before him the fact that his duty is to explain the principles of medicine as related to the question at issue. He is called, presumably, because he is qualified by training, research and experience to make clear to the court and jury, facts not within the grasp of the ordinary witness, and yet of vital interest in assisting the court to arrive at a just decision.

His position is, therefore, a most honorable one, and if he exhibit the true qualifications of a medical expert, he will necessarily command the respect of the court, and uphold the dignity of his profession.

It is unfortunate for the medical profession that there are many self-constituted medical experts; men who are willing to go upon the stand and attempt to give expert testimony upon any branch of medicine they have heard lectured upon. A physician who claims to be an expert in several branches of his profession is fairly sure to be well equipped in none, and as an expert, an imposter.

It has been my misfortune to sit in court on several occasions and hear testimony by physicians who posed as specialists, but whose testimony was so crude that it embarrassed even the examining counsel.

On one occasion I suffered the embarrassment of being called in a contested will case to confute the testimony of a young physician who had not seen ten cases of insanity in his entire practice, but who claimed to possess the qualifications of an expert in mental diseases. He was kept on the stand for several hours, and during that time made three different and distinct diagnoses of the mental ailment from which the testator was suffering, none of which were in harmony with the symptoms as stated by him and by the other witnesses.

There should be an effort made both by the medical and lega

professions to establish a standard of qualifications for medical experts; and any physician desiring to practice in court as an expert in any special branch, should be required to qualify according to the legal standard so established, and upon meeting the qualifying requirements he should be granted a certificate and be recorded in the office of the clerk of the county in which he has residence.

Under such a course of procedure, the medical profession would be freed from much embarrassment, and the legal profession would better understand the value and skill of physicians whose services they need as counsel, in making clear the principles of medicine involved in court proceedings.

There has justly arisen much dissatisfaction as to the manner of selecting experts, and the use of the testimony given by them; and it does seem clear that some legal regulation by statute could be adopted which would render this form of testimony more valuable, and at the same time facilitate court proceedings where the services of experts are deemed necessary.

I have thought that if a law should be enacted that when medical testimony is necessary, the counsel on each side should have the power to select one expert and the presiding judge the third, and these three experts required to sit together and consider all available testimony and render their opinion in a conjoint deposition, the results would be uniformly more satisfactory, and add more dignity to the procedure as well.

In this manner, the scientific opinions of judiciously selected men of ability would be brought to the aid of the demands of justice, and to the protection of the best interests of society by the dispassionate elucidation of complex medical problems. This would dispose of the adverse criticism not infrequently made by opposing counsel, to the effect that experts were little short of paid medical advocates, as their remuneration under such course could not be said to depend upon the character of their testimony. If this be not practicable in civil suits, it cannot be disputed that it would be attended with gratifying results in criminal proceedings.

It has been my practice for years to prepare a carefully written medical brief in all important cases in which I am called as an expert. This was suggested to me by a number of painful experiences upon the witness stand.

On many occasions in my direct examination I found that the

counsel, though deeply interested in bringing out my testimony, was so unfamiliar with mental diseases and the necessary technical terms, that his questions were both embarrassing and confusing. On one occasion, the lawyer examining me asked the same question seven times, and I believe he would have asked it seven more if I had not told him I had answered it so often that I was tired; and the perplexing feature of the situation was that it was irrelevant, and my answer, if at all responsive, could shed no light upon the question, or be of any value to him or his cause. After going through numerous ordeals of this kind, I came to the conclusion that I could better serve the paramount interests involved by preparing in each case a medical brief.

In these briefs I sum all the evidence given and all that the counsel assures me will be given relating to the family history of the subject, his delusions, illusions and hallucinations (if he has any), the character of the acts performed, the conditions under which it was done, the absence or presence of motives, his relations to the person or persons affected by the act in question, his educational advantages, his habits of daily life and the duration of his alleged mental derangement. I make a diagnosis; I give the typical symptoms and characteristics of the form of mental disease which I have decided the subject to be suffering with.

This is followed up with conclusions as to the existing responsibility, testamentary capacity or contractual capacity under such abnormal conditions of mind.

These points clearly set forth need only to have the standard authorities on insanity in its medico-legal aspect quoted in writing to substantiate or reinforce the conclusions and opinions laid down, and with this done, the brief is completed in duplicate. One copy I give to the counsel that he may fully understand my views, as well as those of the accepted authorities on the question. If other physicians be associated with me, I submit my duplicate to them, that we may confer upon any important points where there is room for difference of opinion in detail.

When I go upon the stand, the counsel approaches the work of examination with a confidence that is born of knowledge and preparation, and the wheels of justice run smoothly as they go over the medical portion of the track.

I commend to all medico-legal experts the preparation of such

briefs, and assure them of their appreciation by the counsel, to say nothing of the improvement in the tone and general character of the examination to follow.

The responsibilities of the conscientious medical expert are many, his perplexities are legion, but in the highest conception of his duties, his mission is a noble one. To traverse the entire field of his activities even in a general manner, would mean the writing of a treatise.

I wish to conclude this paper with some terse suggestions to the medical expert in mental diseases with special reference to court work.

He should use every legitimate means to know his case thoroughly in all its details before going upon the witness stand. It is highly important that he should be calm, deliberate and dignified while testifying, always bearing in mind that deliberation, within bounds, is far more creditable, and more characteristic of ability than sharp repartee, and that while "legal evidence is composed of testimony, all testimony is not necessarily evidence in law," and that dogmatic evidence convinces neither the court nor the jury.

He should speak clearly and distinctly and sufficiently loud to be easily understood by all who are entitled to hear him.

There is nothing more calculated to detract from the weight of his testimony than his assuming the role of an advocate.

Prepare a carefully written brief, that the counsel may be by its aid, made familiar with your views on the issue and more conversant with all necessary technical medical terms, as well as some of the standard authorities in harmony with your conclusions. But it is the course of wisdom to avoid the use of all unnecessary technicalities, or such strictly medical terms as are calculated to confuse counsel or jury.

The display of irritability of temper is never in order, and can only result in leaving an unfavorable impression upon, not only those directly interested, but upon every one present.

It is not the course of wisdom on the part of the expert to assume to know something which he does not, nor should he hesitate to say "I do not know," when such is the fact; for while he may be a well-qualified expert, no one can reasonably expect him to be a medical encyclopedia.

He should, above all things, preserve his dignity and mental poise when nagged at by small-calibred lawyers.

It is always the part of wisdom to be frank in answering fair questions, but he should not allow himself to be forced into giving an answer of "yes" or "no," when such an answer does not fairly represent his views. Hypothetical questions are often so framed that they cannot be so answered with justice to the witness or the issue in question.

To be drawn into petty arguments is unwise, even if the court be so patient as to allow it. He should always keep in mind the fact that he is a physician, and as a physician, a gentleman, and a promoter of order and justice.

EXTENSIVE FRACTURE OF SKULL. INSERTION CELLUOID PLATE. TRAUMATIC EPILEPSY AND RELIEF BY SUBSEQUENT OPERATIONS.

BY JOHN C. McCOY, M. D., PATERSON, N. J.

The history of traumatic epilepsy and operation for its relief has been and is rather unsatisfactory so far as absolute cure is concerned. There is, however, no question but that in a considerable number of the more aggravated forms, while surgical intervention cannot promise a permanent arrest of the epileptic seizures, it may, and does, at times, very greatly reduce their frequency and severity.

The results obtained by operation must depend largely upon the amount of damage occasioned by the trauma, and the accompanying development of new connective tissue at the seat of injury.

Though in the traumatic type, as a result of extensive laceration of brain tissue, we may not expect an absolute cure, we may in many cases, look for a mitigation of the symptoms and hope that by the removal of a mass of cicatrical tissue, or elevation of a depressed fragment of bone, to not only attentuate the individual epileptic seizures, but also increase the period of time between the attacks, and perchance, save the patient more serious trouble in later life.

When we consider the pathological changes which take place in the cortical and sub-cortical areas as the result of trauma and laceration, it is not surprising that our efforts in the line of surgical intervention are not followed by absolute relief of the epilepsy.

It matters not how carefully and thoroughly the surgeon may dissect away the cicatrical tissue which is acting as a focus of irri-

tation, after his work is done, there must inevitably remain trabeculæ of connective tissue, projecting from the limits of the operative field and permeating between the convulutions, or extending between the brain and dura. The adhesions, slight though they may be, will most probably continue to act as a source of irritation.

In cases of brain injury, where there has been more or less laceration of the cortical and sub-cortical tissues, the development of cicatrical tissue, which, acting as a focus of irritation, eventually causes the epileptic seizures, even after the careful removal of such tissue, we then have practically the same conditions present which existed at the time of injury.

In some cases the convulsive seizures may make their appearance immediately after the injury, and in others at a varying length of time thereafter, this variation in time depending upon the period required for the cicatrical tissue to attain such proportions that its pressure and consequent irritation are sufficient to cause the epileptic seizures.

And since after the removal of the cicatrix, the same conditions exist, we may look for an abatement of the seizures only until such time as the cicatrical tissue has again formed, when we will once more have either an attenuated, or, possibly, a more aggravated form of the same conditions as existed prior to operation.

Operation is, in my opinion, justifiable in all cases where the epilepsy can be tracable directly to recent trauma, since while we cannot promise a cure, we may at least hold out the hope of partial relief.

The object then in all operations for this condition should be: (1) To remove as much as possible of the newly-formed connective tissue. (2) To mimimize as far as we are able, the recurrent development of such tissues.

It is with the object of emphasizing more particularly this second point that the following case is reported.

F. E., male, age, —; family history, negative; no previous morbid or personal history.

Present Condition.—On January 11, 1896, the patient, while on the sidewalk was struck upon the top of the head by a piece of concrete thrown from an upper story. Immediately after the injury, the boy was removed to the hospital in a semi-conscious condition, when spoken to sharply could be aroused and would answer questions in

a prefunctory manner; would, however, immediately drop into a dull apathetic state again.

Physical Examination.—Well nourished, heart and lungs normal. Upon the right side of the head extending over the posterior portion of the frontal bone, was a lacerated wound, 5 c. m. in length.

Palpation over the seat of injury gave evidence of a comminuted fracture of considerable extent. Within an hour after receiving the injury, the wound was opened, showing the following conditions:

Three detached fragments of bone, including the entire thickness of the skull were exposed.

The two large fragments in their median line were pressing down upon the brain, being at this point depressed at least 2 c. m. below the level of the skull.

The third, but smaller fragment, triangular in shape, was driven into the brain tissue.

The area included by the detached fragments extended over the frontal bone, from 6 c. m. anterior to the coronal suture, to 4 c. m. posterior to that suture over the parietal bone.

The width of the area on the coronal suture was 5 c. m., the widest part of the cavity was 2 c. m. anterior to the coronal suture, where the measurement was nearly 7 c. m.

The entire length of the cavity was 10 c. m., and its greatest breadth 7 c. m., 3 c. m. anterior to the coronal suture, was the base of the small triangular fragment. The apex, sharp and cutting, had been driven so far into the brain tissue, that the base was just visible above the cortex.

Where the apex of this smaller fragment had been attached to the frontal bone, a fracture started which, passing through the orbital arch, extended into the orbital plate of the frontal bone.

Posteriorly, a fracture commenced where the apex of the larger triangular piece had been attached to the parietal bone. This fracture extended in an antero-posterior direction on a line parallel with the inter-parietal suture, and a little to the right of the line. Midway between this suture and the squamous suture, the fracture extended through the Lambdoidal suture, into the occipital bone for a distance of 4 c. m.

A third fracture extended directly down from the inner margin of the wound into the temporal fossa.

When the fragments were elevated, it was found that the dura

over this entire area was so badly lacerated that it was necessary to remove the remaining shreds.

The brain tissue throughout the entire area was more or less macerated, and in the anterior portion of the wound the sub-cortical tissue had been gouged out by the smaller fragment, leaving a cup-like depression 4 x 3 c. m., with a depth of at least 2 c. m. The macerated tissue was removed and the edges of bone rounded off.

Owing to the fact of no plate material being at hand the scalp wound was partially closed.

A small drainage tube was introduced into the anterior angle of the wound, passing into the cup-like depression in the brain from which there was persistent oozing.

Subsequent History.—January 12, during first twenty-four hours following operation the pulse varied from 120 to 146. Respiration 27 to 36, temperature 100 to 102⅘.

Patient complained of pain in head, was very restless and mental condition dull.

January 13, temperature 105⅘, pulse 139, respiration 32. Tingling sensation in left arm and hand; arm and hand cold. Drainage removed; slight oozing.

January 14, temperature 104⅘. pulse 132, respiration 32.

At 3 P. M. patient had a convulsion lasting ten minutes. Twitching commenced in the left side of face and neck, extending to left arm and leg, and then became general.

During the following nine hours he had eight general convulsive seizures lasting from one to twelve minutes. One of these convulsions, however, was slight in character and was confined to the muscles of the head and neck on the left side.

January 15, highest temperature 104⅕, pulse 127, respiration 26.

There was continued restlessness accompanied by a very sluggish mental condition.

One general convulsion lasting two minutes.

January 16, temperature 102⅕, pulse 106, respiration 24.

One slight convulsive seizure, confined to head and neck muscles, lasting two minutes.

Eight general convulsions lasting from two to fifteen minutes.

Extremely restless and talkative, mental condition clearer.

At the suggestion of Dr. M. Allen Starr, 30 grs. of urethane were administered per rectum.

January 17, temperature 100⅘, pulse 112, respiration 20 to 40.

Eleven general convulsions lasting from five minutes to one hour.

January 18, temperature 101⅗ to 99⅕, pulse 99 to 135, respiration 24 to 30.

Fourteen convulsions lasting from two to twenty-five minutes.

January 19, temperature 99, pulse 100, respiration 30.

Three general convulsions lasting from three to fifteen minutes.

January 20, mental condition much improved, temperature 99⅗, pulse 94, respiration 28.

No convulsions from this time, and the convalescence was uneventful. His general health remained good excepting occasional headaches up to the 26th of March, 1898, over two years after the receipt of the injury. On this date he had a general convulsive seizure.

From the 26th of March to the 4th of December he had twelve convulsions.

On December 14th, 1898, under the direction of Dr. M. Allen Starr, the scalp was opened and the following conditions found.

The scalp was adherent to a mass of dense connective tissue, which covered the entire area from which the bone had been removed.

This cicatricial tissue was adherent to the edges of the bone, extended for a distance of 2 c. m. beyond the edges of the bone on the upper surface of the skull. It was closely adherent and incorporated with cortex over the entire area, and completely filled the cup-like depression in the anterior portion of the wound. This cicatricial mass was excised, the plug of tissue in the depression carefully removed, and the tissue dissected from the edges of the bone.

A celluloid plate 2 c. m. larger than the exposed area was placed directly upon the bone and covered by the periosteum and other tissues of the scalp.

A small drainage tube was carried out from the front portion of the wound to give exit to the blood which oozed slightly from the exposed brain.

Drainage tube removed on third day. Patient left hospital on tenth day.

Wound healed by primary union. Pulsation distinctly perceptible over the plate.

January 8, 1899, the patient had a general convulsive seizure, another on January 13, and still another on January 27.

At this time there was a bulging at the posterior part of the plate, and pressure over this area was accompanied with pain.

On February 2 the scalp was again opened. The plate had shifted a trifle toward the median line. Under the posterior portion of the plate was a mass of exudate pressing the plate upward. When the plate was removed there was found to be a mass of cicatricial tissue, stretching across the entire field, attached to the skull on either side of the cavity, and adherent to the brain.

This cicatricial tissue was removed with the connective tissue which had again filled up the depression in the anterior portion of the wound, after a new celluloid plate was patterned shape of the cavity but 1 c. m. larger.

A small cut was then made in the plate on each side of the two ends somewhat in the form of a Greek cross. These cuts permitted the plate to be partly folded and thus diminish its circumference. The plate was then placed beneath the skull rather than on top of it, as is usually done.

The newly formed connective tissue had been found extending from the margins of the bone to the brain tissue, and the cortex was intimately adherent throughout the entire circumference of the cavity to its bony margins, consequently even from the pulsation of the meninges there must have been more or less irritation as the result of the fixation of the brain at these points by bands of connective tissue holding it fast to the edges of the bone. The more extensive and dense these adhesions become the more pronounced must have been the irritation. It was with the hope, therefore, of diminishing the area from which adhesions could extend to the cortex that the plate was introduced under, rather than above, the skull.

Of course no surgical procedure could prevent the cicatricial tissue from again filling up the depression in the front of the wound, but the subsequent history of the case would seem to show that the introduction of the plate beneath the skull in such cases is worthy of consideration.

Subsequent History.—Eleven days after the operation the patient had fifteen convulsions in twenty-four hours. On March 4th, two convulsions in twenty-four hours. On April 10th, 1899, to August 20th, 1900, the boy was entirely free from convulsions.

From August 20th, 1900, to August 20th, 1901, he had one convulsion.

From August 20th, 1901, to April 4th, 1902, one convulsion.

From April 4th to the present time he has had fourteen.

EXCISION OF THE SCAPULA.

BY EDWIN FIELD, M. D., RED BANK, N. J.

In presenting this paper, I simply wish to call attention to the operation of complete excision of the scapula, and to present two cases; one of complete and one of partial excision of that bone.

This operation has been performed upon patients varying in age from fifteen months to seventy years. It was first performed by Cummings, in 1808, who removed a portion of the bone. Lister, in 1819, removed the upper two-thirds without sacrificing the arm. Gartini Bey, the Turkish surgeon, in 1830, amputated the arm and then removed the scapula entire. In a majority of the operations, the glenoid cavity was left. Musey, of United States, excised the whole scapula and clavicle, in 1837, for osteo-sarcoma. Gross states that this patient was in excellent health fifteen years after. In 1838, McClellan removed clavicle and scapula, but patient died. Gross removed the bone in 1850, sawing through the neck. Langenbeck, in 1855, first removed the scapula and three inches of the clavicle, preserving the arm. In 1869, Syme went a step further, disarticulating the bone and removing the scapula with all of its processes, leaving the arm untouched. Since then the operation has been performed several times successfully, leaving the arm untouched. Statistics and history of excision of the scapula were made the subject of special investigation by Dr. Stephen Rogers, of New York, and Professor Adelman, of Berlin, who failed, however, to make any distinction between complete and partial excision and operations in which the upper extremity has been removed at the same time, and also amputation above the shoulder. Ashurst in his surgery in 1884, gives a table of forty-two cases of complete excision, the arm being preserved. Of these, thirty-two recovered, eight died and two result unknown, making a mortality of twenty per cent. In fourteen cases subsequent to amputation, but not at the same operation, eleven recovered and three died, a mortality of twenty-one per cent. In one hundred and ninety-five cases reported by Professor Adelman, four of which were amputations above the shoulder and one of complete excision and should be deducted, leaving one hundred and ninety; adding four from his table of complete excision and twelve additional cases reported by others, making two hundred and six cases of partial excision, giving a mortality of twenty-four per cent.;

the mortality of complete excision being less than that of partial.

Sajou's *Annual* reports a case of successful removal of the scapula for osteo-periostitis following typhoid fever, with a later regeneration of bone and complete recovery of full use of the shoulder. As the result of his investigation, he places the mortality of complete excision at twenty per cent. Southam, Perrier and McClellan report cases operated upon in 1889, and Pasaeles, a case in 1876; Wm. B. Hopkins, in June, 1703. *Annals of Surgery*, reports a case of excision with recovery of the use of the arm, and also reports thirty-two cases operated upon between 1897-1901, and twenty nine cases prior to 1897.

My case of complete excision was a boy fourteen years old, who, three months previous to operation, was thrown in wrestling, upon his back; the contusion was followed by an abscess three weeks after the injury, which opened above and below the spinous process, the abscess continuing to discharge. The physician in attendance, Dr. Ingling, sent a specimen to the State Laboratory; the report returned no tubercular bacteria. Upon admission to the Monmouth Memorial Hospital, three months after injury, two sinuses were found leading down to the bone, one above and one below the spine. Connecting them with an incision the scapula was found necrosed, honey-combed, with opening filled with pus. The entire scapula was removed; the claviculo-acromial articulation was destroyed, but the clavicle was not involved. The bone was easily removed with very little hemorrhage. The patient made a good recovery, the functional use of the arm returning in three months, and has been gradually improving. The patient gave no tubercular history nor were bacteria found at any time.

Case 2.—A boy ten years old injured the shoulder learning to ride a bicycle. The contusion was followed by an abscess, which continued to discharge for five months. Upon admission to the Monmouth Memorial Hospital an exploration revealed necrosis of the scapula, a condition very similar to the preceding case. Four-fifths of the bone was removed, sawing through the spine and leaving the glenoid cavity. The patient made an excellent recovery, functional use of the arm following in two months. This patient gave no tubercular history nor were bacteria found at any time.

(Dr. Field had these two boys present for examination, and also exhibited the bones which had been removed.)

VACCINATION—HOW LONG DOES IT PROTECT? HOW SHALL IT BE CONTROLLED? WHAT ARE ITS SANITARY AND COMMERCIAL ASPECTS?

BY W. UPDYKE SELOVER, M. D., RAHWAY, N. J.

When notified by the Business Committee that I had been designated to open this discussion, the subject being given in a single word, viz: "Vaccination," I confess I was at a loss to know how to present such a familiar and simple little operation, although it is, nevertheless, important, and not insignificant in its results, and I am sure every available means should be used to induce or compel a submission to it for the individual and general good, as it is, I doubt not, the best known preventive of smallpox. Every one ought to be vaccinated, and revaccinated, and every physician should exercise due care as to the technique of this, in itself, simple procedure. And yet, from its mere simplicity, I apprehend physicians are often careless in its execution, and, therefore, often have not as successful results as might be desired. Because smallpox spares no age, and is especially fatal in infantile life, I would advocate early primary vaccination, at latest by the sixth month, in the case of strong, healthy infants.

If the child be delicate, and in the absence of an epidemic of smallpox, it would probably be well to allow a delay of several months. If smallpox should attack any member of a family, or should appear in the immediate vicinity, the infant should be vaccinated whatever its condition, barring acute and serious illness, and the other members of the household as well.

Bovine lymph will often produce more severe local effects than humanized does, for which reason some physicians prefer humanized lymph for delicate children, without fear of danger of the transmission of disease through the lymph, supporting their theory by the assertion of some recognized authorities that it is impossible to convey disease in the use of humanized virus, with, perhaps, the single exception of syphilis, and even then, they claim the danger is insignificant in the presence of due carefulness. The lymph should be fresh, and such as has been taken from a sound and perfectly formed vesicle, about the eighth day, care being observed not to have an admixture of blood with the lymph.

The region about the part to be scarified should be thoroughly cleaned in any way the physician may elect, and dried by a rather

vigorous rubbing, thereby rendering the part somewhat hyperæmic, and, therefore, more prone to absorption. It might seem to go without saying, the instrument should be scrupulously clean, having been sterilized before using. If, as the vesicles approach maturity, local irritation from any cause should become excessive, sterilized lint saturated with lead lotion, frequently applied, will probably afford relief.

The part should be kept clean and protected from friction, mostly for the sake of avoiding the addition of any traumatic effect to the inflammatory symptoms.

In the regular and uninterrupted course of primary vaccination we will find the first week occupied with the formation and maturation of the vesicle; during the second week we have the appearance and decline of the areola and the formation of a scab, and at the end of the third week the scab will separate, leaving the characteristic cicatrix.

The slight constitutional symptoms that are usually concomitant with these local phenomena are a rise of temperature, commencing about the fourth day, increasing during the areolar stage, sometimes accompanied by disorder of the stomach and bowels, subsiding with the fading of the areola, and about this time we may find indurated and painful axillary glands.

Just here, in some cases we have the appearance of a vaccine roseola, vaccine lichen, or vesicles, although the vesicles differ from true vaccine vesicles in that they have no central depression. These eruptions usually disappear in about a week without treatment.

In order to be able to certify to a successful and protective vaccination, it is necessary that the successive phenomena of the different stages of vaccination shall have conformed to the normal type—at least very closely.

We will sometimes meet with cases where the development of the vesicles will be either retarded or accelerated by two or three days, but such a slight variation from the normal course will not invalidate the protective effect, providing the phenomena, in other respects, be regular and typical. We should, however, be on the alert for a spurious form of vaccination that is not likely to be protective, distinguished by marked irregularity in its character and course.

Papules and sickly looking vesicles may appear and disappear too early, attended with much local itching, become conoid, instead of flat

with a central depression, and contain a thick, opaque matter in place of the usual clear lymph, with an illy defined, irregularly shaped areola, a small, thin crust, all disappearing, probably, in about a week.

We sometimes have the ordinary course of a successful vaccination complicated from extraneous sources, as friction of the clothing, various injuries, uncleanliness, etc., developing ulcerating sores, and, perhaps, suppurating axillary glands, and occasionally the supervention of erysipelas, which are mostly avoidable accidents, following somebody's carelessness.

The length of time that a successful primary vaccination will be protective will vary very widely in different cases, from a few years to a lifetime. I presume the most of us have known instances of aged people who never could be successfully revaccinated, their early vaccination continuing protective through life.

In a hospital experience I had charge of two well-filled smallpox wards for some time, without the appearance of any symptom of the disease, never having been vaccinated successfully since infancy. If susceptibility to revaccination is coincident with susceptibility to smallpox, I see no reason why the reverse statement should not be true. I believe, however, in the vast majority of cases, the persistent effects of a primary vaccination will be exhausted in a comparatively few years—probably in eight or ten—and, according to some authorities, the immunity is exhausted most rapidly during the actively metabolic period of youth, and so most persons can be successfully revaccinated at or before puberty, and probably several times during adult life. Certain diseases are said to jeopardize the immunity afforded by vaccination. Revaccination seems to vie with the primary in its protective effect.

It is beyond the scope of my conception to see how any unprejudiced person can decry the usefulness of the measure, for, to my mind, it would seem that there could no longer be any doubt of its efficacy and of its eminently practical value. If there is any reliance to be placed on statistics, it can easily be thereby proven that in countries where it has been carried out persistently, and, to a degree, systematically followed, the frequency and extent of smallpox epidemics have been perceptibly lessened.

I have not sufficient time at my command to quote from statistics that I have taken pains to look up from the literature at hand, but will simply say that they prove, beyond any cavil, that where vaccina-

tion is practiced regularly in infancy, infantile mortality from smallpox has been reduced to almost nothing; and where revaccination has been performed regularly, thoroughly and universally through adult life, epidemics of the disease have been relegated to "ancient history." With such cold facts facing our friends—the enemies of the measure—it would seem that they must acknowledge they have no happy vantage ground to afford them actual standing.

I have endeavored to trace the efforts of the opponents of vaccination, with the idea of discovering, if possible, the soundness of their objections, but have been able to find only flimsy and unreliable arguments in opposition to the procedure.

They have failed, by all sorts of sophistry, to prove its uselessness, while the experience of all unprejudiced physicians furnish unanswered and unanswerable arguments proving the fallacy of their reasoning.

They claim all sorts of injurious effects as a direct result, without presenting the slightest approach to convincing proof backed up by clinical experience, or otherwise, to substantiate their claim.

True, we all admit there may be temporary illness, with fever, during certain stages of the process, but if caution be observed in the little operation, and if it be not performed on children too young, feeble or sickly, during the period of dentition, or at unfavorable seasons of the year, any permanently bad results will be extremely rare, so rare that in comparison with the positive advantages that obtain, they will fade into such insignificance as to be utterly unworthy of consideration, and our opponents are truly welcome to the outcome of the comparison.

Far be it from us to allow apprehension of any bad result of extremely rare occurrence to be offered as a reason for abandoning a practice that is but waiting to see the finish of such a loathsome disease as smallpox.

Because long experience has shown, beyond the shadow of a doubt, that vaccination is an all-powerful weapon against smallpox, and since instruction, persuasion and admonition fall very far short of attaining the desired end, it would seem that nothing short of legal compulsory vaccination can accomplish the possibility of practically eradicating the direful scourge. And in the matter of legal compulsion we can discern no great injustice, since the preposterous pretext that the measure is injurious is altogether untenable, as set forth by abundant proof that the misconceived dangers of vaccination are

wholly imaginary, and any harm that could possibly result can certainly be avoided by caution born of experience.

DISCUSSION.

DR. GEORGE E. READING, of Woodbury.—The first part of this discussion is with regard to the length of time vaccination affords protection. If you vaccinate a patient, it is extremely important to know within reasonable limits, how long the protection thus afforded will last. It is a question which cannot be determined absolutely, because, just as the immunity from disease itself varies in different individuals, so the protection afforded by vaccination varies, but, as a general rule, it may be said that the immunity is not so long in young children as in adults, and that, therefore, a child having been vaccinated when small, should again be vaccinated at or about adolescence. In the vast majority of cases, I believe this will protect during life; nevertheless, it is much safer to revaccinate if an individual is directly exposed to smallpox. Some cases will "take" after such vaccination, just as a person may take smallpox three times, although this is very exceptional.

The question of how it shall be controlled—that is, the enforcement of vaccination should be controlled, is a difficult one. At the present time, the only general way is by forbidding the admission of children into the schools until they have been vaccinated. Even this is not effectual, because the law says "duly vaccinated," not *successfully* vaccinated. This is a matter which should be brought to the attention of our legislature, and the law made more effective in some way. There is no need, however, for making the laws more effective unless the present laws are enforced so far as possible. We had a census taken of the school children recently, and found that 70 per cent. of the school children had never been vaccinated. We should urge upon our boards of health and the school authorities the absolute enforcement at least, of the present statute, and then try, if possible, to make the law more stringent, The existence of smallpox to-day is a disgrace to civilization, because it can be stamped out.

PNEUMONIA AND PLEURISY IN EARLY LIFE SIMULATING APPENDICITIS.

BY J. P. CROZER GRIFFITH, M. D.

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Quite recently attention has been called in several quarters to the simulation of appendicitis, or peritonitis, by pulmonary processes, especially pneumonia and pleurisy. The fact that this simulation often occurred, has long been known, but is quite commonly overlooked, and, inasmuch as the diagnosis is certainly at times extremely difficult, and since operation for appendicitis has even been performed when only pneumonia was present, I have thought it of interest to report a few cases of this nature, and to quote those of like sort which have come to my notice in medical literature, limiting myself entirely, at least, in detailing cases, to the occurrence of the condition in early life. It is, indeed, at this time, that the confusion is most likely to happen, although some cases developing later in life, are also met with in literature.

Of the cases reported here, the first two have already been detailed by me in previous publications, the others have not. Two of them occurred in the private practice of Dr. H. R. Wharton, and the notes of them were kindly given me by him.

Case 1.—Mary Agnes McConnell, aged 8 years, admitted to St. Agnes' Hospital, October 27, 1893, suffering from chorea. On November 15, she became suddenly ill with very severe abdominal pain and tenderness, and with such a marked appearance of some grave condition, that the resident physician feared arsenical poisoning. The temperature was elevated, the pulse 170 and the respiration from 80 to 90, and very shallow. There was severe abdominal pain and tenderness. The details of the condition as reported to me made me suspect peritonitis. I examined her on November 16, and found that the abdomen was very much distended and tender; there was abdominal pain; the expression of the face was anxious, and the legs were held constantly drawn up in bed. The temperature had risen to 102. The rapidity of respiration, combined with its shallowness, appeared to be dependent upon peritonitis, and several physicians who saw her with me, agreed that this was the undoubted diagnosis. There was no cough whatever, but a physical examination of the

lungs was made, however, as a routine, and to our surprise, the upper part of the right lung was found to exhibit pneumonic consolidation. By the evening of the next day, all abdominal symptoms had disappeared.

Case 2.—Simon L., 4 years old, admitted to the Children's Hospital, January 19, 1899. He was taken acutely ill on the 14th with obstinate constipation, abdominal pain and distension, and tenderness in the right iliac fossa. Cough was not noted, if present. The physician who saw him had already made the diagnosis of appendicitis, but the child was admitted to the medical ward, inasmuch as operation had been forbidden by the parents.

On examination on the 20th, the child was found evidently in much pain; had an anxious expression of face; shallow respiration of from about 30 to over 40 per minute, and held the legs drawn up most of the time. The abdomen was not distended, but was tender in the right iliac region, and everywhere rigid enough to make palpation difficult. As far as it was possible to determine, no tumor was present. The temperature varied from 103 to 105. Except for a few coarse rales, nothing could be detected on examining the lungs in front. Owing to the great distress of the child, and because the diagnosis of appendicitis seemed so positive, the posterior part of the chest was not examined on this date. On the next day, the 21st, pneumonic consolidation of the left lung was easily found. The abdominal symptoms remained unchanged. On the 22d, all abdominal symptoms had disappeared. Crisis occurred on the 24th.

In neither of these cases was there apparently any reason to suspect anything but an appendicitis, or a peritonitis secondary to this. In the light of later experience, however, one sees that certain suspicious symptoms were present. The height of the fever in the second case, and, especially, the rapidity of the respiration, ought to have rendered me more cautious in diagnosis. It is certain that in the second case, the child would have been at once transferred to the surgical ward for operation, if this had been permitted by the relations, and that operation might have been done if a more careful examination had not been made.

Case 3.—Myer M., 6½ years old, admitted to the surgical ward of the Children's Hospital, March 17, 1900, supposed to be suffering from appendicitis and pneumonia, having been ill for two days. The exact nature of the symptoms previous to admission is not re-

corded. Examination on the 18th showed the abdominal walls tense and everywhere tender, especially on the right side, where rigidity and tenderness were especially marked. The respiration was from 45 to 55; the pulse over 130, and the temperature from 103 to 104. Breathing appeared to be painful. Examination of the lungs showed slight impairment of resonance over the upper lobe of the left lung in front, and of the lower lobe behind, yet nothing very characteristic or diagnostically positive was discovered. On the 19th, the temperature was 103, the respiration from 40 to 50. The abdomen was distended and tympanitic, and the epigastrium and the region of the appendix was tender on pressure, and the left iliac region to a less extent. Abdominal pain was constantly present, but less than on the preceding day. The expression of face was that of pain; herpes was present on the lips; the chest was tender everywhere on percussion. No change in the pulmonary condition is recorded.

On the 20th the child was much brighter. The abdominal symptoms persisted, and physicial signs of pneumonia of the right lung were very positive.

By March 21st, all abdominal symptoms had disappeared. There were now, however, evidences of some degree of pneumonia in both lungs and the temperature was falling. By the 23d it was normal.

This case was puzzling; not so much to determine the presence of pneumonia, which was suspected before admission, but because it was considered that the disease was occurring conjointly with appendicitis. Operation was considered when he first entered the surgical ward. I was asked to see him on the 19th or 20th and determined positively the presence of pneumonia. Experience with the earlier cases made be believe that the abdominal symptoms were referred entirely from the lungs. The later course of the disease appeared to render this unquestionable.

Case 4.—K. S., male, 7 years old, admitted to the Children's Hospital November 2d, 1899, under the care of Dr. H. R. Wharton. He had had at various times, more or less abdominal pain, but never severe until three weeks previously, when he had a typical attack of appendicitis, as regarded by the physician in charge of him. The symptoms, at the time, consisted of severe pain and tenderness in the right side of the abdomen—especially at McBurney's point—fever, constipation and restlessness. He recovered partially,

but the tenderness is said to have remained. On October 30, three days before admission, he had had a recurrence of the pain, and again on November 1. There had been no vomiting at any time. Fever was said to have persisted since the attack, three weeks before. On admission, the temperature was 103; respiration varying from 32 to 80 and the pulse from 132 to 196. The abdomen was distended, tender and somewhat rigid. These symptoms were especially marked on the right side. There was also bronchial respiration over the entire lower lobe of the left lung. The attending physician had in person taken the child to the hospital in order to have an operation for appendicitis performed. On refusal by the surgeon to do this, he became very angry, disputed the diagnosis of pneumonia, said he had brought the child for the sake of operation solely, and would remove him if it were not performed, and used other language more forceful than polite. He was requested to go to the ward to examine the patient himself again. This he did, and then apologized.

By the evening of the same day the temperature had fallen to 99.2. No further abdominal symptoms were recorded, and the pneumonic consolidation rapidly disappeared.

This case hardly needs comment. It shows how absolutely one may be deceived by the pseudo-appendicular symptoms, unless careful study of other parts of the body is made.

Case 5.—Walter E. C., 11 years old, admitted to the Children's Hospital to the service of Dr. Wharton, on November 25, 1901. He was taken ill, November 22, with vomiting, headache and pain in the abdomen. The latter soon became localized at McBurney's point and continued until the 24th, being so severe that he lay awake crying during the night of the 23d. There was fever, and the bowels were constipated. Two well-known physicians of Philadelphia, one of them a surgeon, had seen him and made the diagnosis of appendicitis. On examination in the hospital, the temperature ranged from 103 to 104, or more; the respiration from 40 to 55, and the pulse from 95 to 130. There were no certain symptoms of appendicitis discoverable, but a well-developed croupous pneumonia of the base of the right lung was found, and he was transferred to the medical ward, to the service of Dr. F. A. Packard. By this time the principal pain complained of had shifted to the right shoulder. There was also pain in the right side and in the epigastrium, but none had been present in the right iliac region since the evening of the 24th. The

epigastric pain persisted until the 27th, when the temperature fell by crisis. After this date the pain grew less.

By the time the child reached the hospital the change in the locality of the pain had removed some of the difficulty in diagnosis. It is to be noted that the physical signs of pneumonia were developed at the time of entrance.

The next case is not so characteristic an example of the likeness of appendicular pneumonia to appendicitis. The child was admitted, it is true, for appendicitis, but this diagnosis was promptly corrected.

Case 6.—Elmer W., 8 years old, admitted to the Children's Hospital, May 8, 1900, in the service of Dr. F. A. Packard. He had awakened in the early morning of May 4th with fever and vomiting. Constipation, fever and cough continued from this date. For two days there had been pain in the right side. Examination showed the eyes sunken, the knees drawn up, the abdomen distended, but not tender, frequent cough, temperature 103, respiration from 35 to 45, pulse from 140 to 170, pain in the right side of the thorax and physical signs of pneumonic consolidation of the right lung. The temperature fell by crisis on the 9th.

The only suspicious symptoms in this case were the sunken eyes, distended abdomen and the drawing up of the legs, pointing towards abdominal disease. The diagnosis, however, was unattended by difficulty.

The following two cases were seen by Dr. H. R. Wharton in his private practice, and kindly submitted to me by him.

Case 7.—Boy 15 years old, seen in consultation, a diagnosis of appendicitis having been made, and Dr. Wharton having been called for the purpose of operating. There was pain in the right iliac fossa and continued high temperature. Examination showed some rigidity of the right rectus muscle, and much tenderness on pressure in the region of the appendix. Further examination, however, showed consolidation of the right lung. The presence of appendicitis was excluded. The abdominal symptoms promptly disappeared, and the child passed through an ordinary case of croupous pneumonia, terminating in recovery.

Case 8.—Boy 8 years old, who for nearly a week had had severe abdominal pain, particularly in the right iliac fossa. Dr. Wharton was called in consultation upon the sixth day of the disease, the diagnosis of appendicitis having been made and operation being

desired. The symptoms pointed to disease of the appendix, but it was noticed that the respiration was quite rapid. Examination of the chest revealed the presence of pleural effusion. This later became purulent and ruptured into a bronchus, the symptoms of appendicitis, meantime, having disappeared. Resection of the rib and drainage of the empyema were required later. Recovery followed.

Cases occurring in children and reported in recent literature have been multiplying so rapidly, that I can give but the briefest synopsis of those which have come to my notice. There is no doubt that a careful search of the older literature would show more extended references to the condition, with illustrative cases, than is ordinarily supposed.

I. Fenwick, (*Lancet*, 1893, Vol. II, p. 79), reports one case.

Boy of 13 years was suddenly attacked with severe abdominal pain, vomiting and faintness after a long walk. In a few hours became delirious. On the next day he was found to have fever, with a temperature of from 102 to 106, pulse 36, herpes on the lips, rapid respiration, occasional short, dry cough, considerable abdominal pain and tenderness, and rigidity, especially in the umbilical and left lumbar regions. The legs were drawn up in bed. Nothing abnormal was discovered in the chest. Vomiting continued troublesome, and the delirium gave place to stupor. On the third day all the symptoms improved greatly, and dullness at the left base behind, with impairment of the respiratory murmur, was discovered. Improvement continued, and the abdominal tenderness disappeared to a large extent. The temperature reached normal in three days. Later, pleural effusion was found.

Four other cases were reported, all in adults. In all, the symptoms pointed distinctly toward inflammation in the abdomen, but the disease appeared to be diaphragmatic pleurisy. In two of the cases, pleural effusion developed. In another, autopsy showed extensive involvement of the diaphragmatic pleura.

II. Morse (*Annals of Gynæc. and Pediat.*, 1897), reports three cases.

(*a*) Boy of 7 years. A blow in the abdomen was followed soon by faintness, nausea and vomiting. The next day nausea, headache, pain in the abdomen, constipation, slight fever and slight abdominal distension and tenderness developed. Examination of the lungs was negative. The abdominal pain and tenderness increased,

especially in the right iliac region, with slight dullness there. Respiration and pulse were rapid, the temperature was high, and there was a constant hacking cough. Appendicitis was suspected. On the fourth day of the attack physical signs of pneumonia were well marked over the right lower lobe, the abdominal symptoms disappearing.

(*b*) Boy of eight years had headache, slight abdominal distension and tenderness, constipation, rapid respiration and a temperature of 105. Nothing was found in the lungs. Vomiting occurred in the night, and on the next day there was a slight cough and the abdomen was much distended and tender, especially on the right side. The examination of the lungs was still negative. Up to the sixth day of the disease the condition was the same. On this date the respiration became more rapid and painful, the cough increased, pain in the chest developed, physical signs of pneumonia of the right lower and middle lobes were found, and all abdominal signs disappeared.

(*c*) Girl of three years, taken ill suddenly with fever and abdominal pain. On the next day she vomited, had continued abdominal pain, but no cough. Seen thirty-six hours after the onset, the temperature was found to be 39.9 C., the respiration and pulse rapid, but nothing abnormal was found in the lungs. On the fourth day of the attack solidification of the left lower lobe was discovered.

Morse considers the occurrence of pneumonia with initial abdominal symptoms not uncommon. He says that the abdomen has been twice opened for appendicitis in children within the past few years by prominent surgeons in Boston, when the trouble was really pneumonia. He believes that the sudden onset with high fever and rapid respiration should suggest pneumonia, even in the presence of abdominal symptoms and the absence of cough.

III. Guinon (*Bull. de la Soc. de Ped. de Paris*, 1901, p. 77) reports one case. Girl of thirteen and one-half years, had had fever, headache and pain in the right side of the chest for about eight days before admission to the hospital. On the day after admission she exhibited an anxious expression of face, sunken eyes, pain in the right side of the abdomen with tenderness at McBurney's point, little cough, no dyspnœa, no physical signs in the chest. The case was supposed to be appendicitis, but firm pressure with the flat of the hand showed no tenderness and no increased resistance, although sudden pressure with the finger-tip gave pain. For two days more

the diagnosis remained uncertain, pain persisted and positive signs of pneumonia were found at the right apex. The temperature fell by crisis in the evening, and on the next day the abdominal symptoms disappeared and the physical signs of pneumonia throughout the right lung were positive.

IV. Massalongo (*Riforma Medica*, 1901, 711) says that he has observed four cases in children of from five to twelve years in which pneumonia simulated appendicitis. He recalls five cases in which operation for appendicitis was done and the organ found entirely sound, the real disease being pneumonia.

He calls the condition pseudo-appendicular pneumonia, and dwells on the difficulty in diagnosis which lasts until after the third or fourth day, by which time the abdominal symptoms lessen and the physical signs of pneumonia are liable to be detected. The pain is projected by way of the sympathetic and the spinal cord to the twelfth intercostal nerve.

V. Richardson (*Boston Medical and Surgical Journal*, 1901, April 17, p. 399) reports five cases in children.

(*a*) Boy of six years, had for three days right lumbar pain, persistent vomiting and headache. On the third day a tense abdomen and right iliac tenderness were found, and the temperature was 104.5. On the fifth day the respiration was 40, the abdomen distended, the legs drawn up, the eyes sunken, and the general appearance bad. A diagnosis of appendicitis was made. On the sixth day the appendix was removed, but nothing of moment was found. Dyspnœa and cough then developed, followed by empyema. He says the case was one of pleurisy simulating appendicitis.

(*b*) Boy four years old. On the second day there was abdominal pain, cough, and a temperature of 101, and appendicitis was thought of. On the third day pneumonia of the left lung was suspected. There was much pain in the epigastrium and in the left shoulder; the respiration was 42 and the temperature 105. On the fifth day symptoms suggestive of pneumonia, but not positive, were found. On the sixth day there was acute abdominal pain, constant in the region of the appendix. The abdomen was distended but not hard, with dullness in the right iliac region. The pain lasted several days and then disappeared. The final diagnosis was pneumonia of the left lung.

(*c*) Girl, five years old, suddenly developed abdominal pain, which continued on the next day chiefly in the right iliac fossa, with a tem-

perature of 104.4. Fever and pain diminished after ten days, but a little tenderness remained somewhat longer. About a week later pain and fever returned, appendicitis was thought of, and Dr. Richardson was summoned to operate. He found pneumonia of the right lung and tenderness along the course of the lower intercostal nerves. There had been no suspicion of the existence of pneumonia.

(*d*) Boy of four years was attacked by cough, restlessness, fever, accelerated respiration, constipation and slight distension of abdomen. Nothing abnormal was found in the lungs. The condition continued, and on the eighth day the child developed abdominal pain, great tenderness over McBurney's point, and rapid respiration. Dr. Richardson was called in on the ninth day on account of suspected appendicitis. He found vomiting, severe abdominal pain, tenderness in the right iliac fossa, distension, but no rigidity. Operation was deferred. On the tenth day pneumonia was discovered, and the abdominal symptoms disappeared rapidly.

(*e*) Girl of seven years had had abdominal pain, fever, rapid respiration aud cough for two days. On the third day the cough ceased, and on the fourth day severe abdominal pain developed, which disappeared but left abdominal tenderness. Appendicitis and peritonitis were suspected. Examination on the fifth day showed tenderness over the appendix, no abdominal rigidity, a temperature of 104 to 105, and respiration of 40. The diagnosis was very uncertain, and operation was delayed. Signs of pneumonia were found the same evening.

Richardson also describes a case in an adult male brought to the hospital for abdominal operation. In a few days pneumonia was found.

He says that in acute right-sided diseases of the thorax the symptoms of appendicitis may be so simulated that a surgeon may be completely deceived. It was only his experience in the first case which kept him from operation in the others. The high temperature and rapid respiration are the most assuring symptoms.

VI. Hampeln (*Zeitschr. f. Klin. Med.*, 1902, 448) reports five cases, all in young adults, and all showing the most typical symptoms of sudden acute abdominal conditions. Collapse was present in some. In all the symptoms simulated peritonitis or intestinal occlusion.

VII. Satullo (*Gaz. degli Ospedali*, 1902, XXIII., 757) reports three cases, all in adults. In all there was severe pain in the right iliac

fossa with an exceptionally high temperature, running from 43° to 44° C. at the maximum. It was only after several days of observation that the diagnosis of pneumonia was possible. Satullo designates the condition appendicular pneumonia, and says that acute pneumonia may begin with symptoms of acute appendicitis and the diagnosis be uncertain for three or four days. Pain at McBurney's point is reflex, and is transmitted along the anterior branches of the twelfth intercostal nerve.

VIII. Barnard (*Transac. Clin. Soc. Lond.* 1902. XXXV., 122) reports two cases in children.

(*a*) Girl of eleven years had had some abdominal pain with vomiting during three days. When seen on the fourth day the temperature was 103.6, the respiration 40 and painful; there was tenderness in the right iliac fossa, abdominal rigidity, and constipation. Four days after admission obscure signs of pneumonia of the right base were found. The temperature fell by crisis this day, but rose again, and signs of diaphragmatic pleurisy developed.

(*b*) Boy ten years old, had been ill for two days with abdominal pain and vomiting following a blow on the abdomen and lower part of the chest. He was admitted to the hospital for acute traumatic peritonitis. Examination showed the abdomen distended, rigid, tender; the legs drawn up; constipation; a temperature of 99.5, soon rising to 103; the respiration 44 and the throat negative. On the next day undoubted signs of pleuro-pneumonia of the right base were found. Empyema developed later.

Four other cases are reported; one in a girl of seventeen and three in men, in which severe abdominal symptoms were produced by pneumonia or pleurisy. In the case of the girl the diagnosis of perforating gastric ulcer had been made, and operation was performed, but no signs of this condition were found. On the next day physical signs of pneumonia of the right base were found. In the case of one of the men operation was performed for supposed laceration of the spleen from trauma, the symptoms being due in reality to a traumatic pleurisy of the left side. The two other cases exhibited symptoms of peritonitis dependent on the presence of pyopneumothorax.

Barnard refers to the fact that the older writers recognized the simulation of abdominal disease by pneumonia or pleurisy. He speaks of cases reported by Andral and by Fagge. He says that the relaxation of the abdominal walls with each inspiration, the rapid

respiration, the absence of weak or irregular pulse, the fact that the tenderness is superficial and disappears under firm pressure by the flat of the hand, and the sudden high elevation of temperature, speak against peritonitis and for pulmonary disease.

IX. Comby and Zielinski (*Arch. de Med. des Enf.* 1902, 741) report one case. Boy of eight years was attacked suddenly by vomiting, abdominal pain, constipation and fever. On the next day there was a temperature of 39.3 C., an anxious expression of face, pain and tenderness on the right side of the abdomen, no cough, and nothing abnormal in the lungs. On the fourth day vomiting and distension of the abdomen developed. Appendicitis was thought of, but beginning physical signs of pneumonia of the right side were found. Crisis occurred on the seventh day.

The writers caution against an early diagnosis based on what appear to be appendicular symptoms. There should be increased muscular resistance and deep induration present to justify the diagnosis of appendicitis.

X. Cozzolino (*Gaz. degli Ospedali.* 1903. XXIV, 45) reports one case.

Girl of three years was suddenly attacked by high fever, severe abdominal pain, especially on the right side, vomiting and anorexia. Examination on this day showed the child lying on the right side with thighs strongly flexed, great abdominal pain and tenderness, temperature of 39.7 C., pulse 150, rapid respiration, slight dyspnœa, dry cough and constipation. She vomited during the examination. Practically nothing abnormal was found in the lungs. After much persuasion palpation of the abdomen was permitted; firm, steady pressure with the palm overcame the muscular contraction, and nothing abnormal was found at McBurney's point. On the next day the pain was slightly less; the cough little worse, and vomiting had ceased, and in the evening characteristic signs of beginning pneumonia of the right base were discovered. Abdominal pain slowly diminished, and disappeared by the sixth day.

He believes that pressure with the flat of the hand is a valuable aid in diagnosis, and dwells upon the caution to be exercised in basing an opinion on the ordinary train of symptoms of appendicitis.

It is not necessary to review much further the individual cases or the general observations of the different writers as already quoted. There is evident a decided uniformity in most of the statements. They are in entire accord, too, with what the new cases I have

reported show. There is, namely, especially in early life, a well-recognized, long-known, but frequently forgotten, tendency for patients with pneumonia or pleurisy to refer to the abdomen the pain really produced in the chest. This is more liable to happen when the disease is situated in the lower part of the thorax, but there is reason to believe that it may occur also when it has attacked the upper portion. It is also more deceptive when the right side of the thorax is affected, since the right side of the abdomen is more liable to exhibit pain, and the presence of appendicitis is suggested. Combined with the abdominal pain in these cases there is also constipation and abdominal tenderness and distension. These symptoms, together with the vomiting which quite commonly ushers in an attack of pneumonia in childhood, easily produce a clinical picture very closely simulating that of appendicitis.

The distinction is to be made by giving due consideration to (1) the sudden rise of temperature to 103 or thereabouts and the tendency to maintain this degree; (2) the acceleration of respiration, which is out of proportion to the pulse rate or the pyrexia; (3) the relaxation of the abdominal walls between the respirations; (4) the diminution or disappearance of tenderness on deep pressure with the flat of the hand; (5) the possible presence of cough. Finally, no operation for appendicitis should ever be performed until after a careful or perhaps repeated examination of the lungs has been made. All these points will, however, frequently fail to make the diagnosis certain, as the experience of some of the able observers quoted has shown.

DISCUSSION.

DR. E. W. HEDGES, of Plainfield.—When we remember that the six lower intercostal nerves are so distributed that some of the fibres run to the pleura and some to the abdominal muscles, I think it very easy to understand how irritation in the chest, involving perhaps the pleura, may be referred to the abdominal wall. There are some symptoms in common—the initial vomiting, the abdominal rigidity and the tenderness on pressure—but I think if the symptoms are well considered, one should seldom make a mistake. The increased respiratory frequency in pneumonia, as compared with appendicitis; the dilation of the alae of the nose and the high temperature, are important diagnostic points. If we made it a rule to examine the chest as a routine measure, I think we would seldom make this mistake, even in the first day of a pneumonia.

Some Common Deformities and Their Prevention.

BY D. T. BOWDEN, M. D., PATERSON, N. J.

The question asked me by a physician a few days ago: "What has an orthopædie surgeon to do with a case of poliomyelitis?" suggested the title of this paper.

How often, indeed, too often, have cases appeared in my private and dispensary practice with severe deformity of various types necessitating the use of the knife and much plastic work on bone, tendon and muscle, which, had they not been neglected, would never have reached such a degree of severity as to maim and cripple the person for life. In viewing my private records and those of the New York Orthopadie Hospital, I found so many cases of this kind, that this subject appeared to me to be of great importance.

Contractures following poliomeyelitis, cerebral or spastic paralysis, pseudo-hypertrophic paralysis, obstetrical paralysis, encephalitis, chronic meningitis, hydrocephalus, meningeal hemorrhage and embolism, multiple neuritis, lead poisoning, etc., may reach the stage of confining the patient to a life in a wheel chair and make him a dependent upon the charity of a community.

In septic conditions, at or near a joint, synovitis, tuberculous arthritis and burns, cicatricial contraction following which very often produces such extreme limitation of motion and deformity as to render the limb completely useless.

In operations upon the bones and joints, the general surgeon seems to completely lose sight of the possibility of deformity following, seeming to only have in mind the curing of the affliction as it appears then. Though an osteotomy for bow-legs or knock-knee, an excision for tuberculous arthritis may have been skillfully performed, many times it accomplishes nothing, or even does harm, through the failure to furnish proper mechanical protection after. In the experience of the writer, cases have reported at the clinic, where osteotomy for bow-legs had been performed, with a return of the deformity in an exaggerated form; or where a knock-knee has followed operation for the correction of bow-legs or vice versa.

Such deformities as lateral and antero-posterior curvature of the spine, rachitis, traumatic and acquired flat-foot, bow-legs and knock-knees, flexion deformities following tuberculous joint lesions, and

those following fractures and sprains, rheumatism and faulty positions in occupations, sitting or standing, faulty decubitus during long illness, all preventable, is a serious reflection upon the medical attendant, and should be, in the present light of our knowledge, almost unknown.

Congenital deformities, as dislocation of the hip or shoulder, club-foot and hand are equally amenable to treatment and cure in the early stage.

Time will not permit a detailed description of the proper line of treatment in each of these conditions, so I shall, with your kind permission, describe the common methods used in the most frequent diseases that lead to deformity.

1st.—Infantile Paralysis.—The deformities following a neglected case of poliomyelitis are often painful to look upon, and are due to over-action of non-paralyzed muscles, gravity and weight of the body, the affected muscles failing to support the limb in normal line.

Given a case of paralysis of anterior group of muscles, the dorsal flexors of the foot, and if neglected, we have a gradual retraction of the calf muscles with equinus deformity as the result, and to correct which, it becomes necessary to do a tenotomy, or what is still better, that operation known as "tendon lengthening," to allow the heel to be brought down. At times, as a result of this deformity and the patient's effort to walk with the foot flat on the ground, we have a severe stretching of the ham-string tendons and hyper-extention of the knee, occurring secondarily. The early application of a simple ankle support with an ordinary catch to limit extension or plantar flexion of the foot at 90°, thus preventing toe drop, would have rendered such an operation unnecessary and given a much better result.

Following paralysis of the gastrocnenuius and soleus, we have calcaneus deformity with shortening of the plantar fascia, application of a brace with a reverse catch, so as to prevent dorsal flexion above 90° would have proven efficient.

The anterior and posterior tibial muscles are alone the seat of permanent loss of power in many cases, and owing to an over-acting calf and perinei, we have the well-known paralytic valgus or flat-foot deformity, to prevent which, the early application of a brace with short inside bar and pad opposite the astragolus to prevent its displacement, would be the proper modus operandi. Paralysis of

perineals causes the opposite deformity, talipes equino varus paralytica, in which condition the outside bar should be shortest and pad placed on outside.

In paralysis of the quadriceps, the bars should be extended to the thighs with bands above and below the knee. Loss of ham-string power; the same brace is indicated.

Flexion of thigh on trunk is to be prevented in weakened extensor muscles or other causes, by extending the bars up higher and attaching to a band around the pelvis.

So I might go on enumerating the deformities of other groups or combinations, but the principles already given will, I am certain, prove efficient, if combined to meet the demands of each individual case.

Perhaps it would be well to explain that I use the word brace, meaning that any kind of a device, be it of gypsum, felt, aluminum, or steel, that will hold the extremity in proper relation to the body, will answer, but a properly fitted walking apparatus is to be preferred.

In wrist-drop, severe stretching of the weakened extension tendons should be prevented by the use of the auterior hand splint, or any appliance that will hold the hand and forearm in an extended position.

In the other forms of paralysis, before mentioned, it is generally the flexor and adductor muscles that are active in producing the malposition. Daily stretching, massage and exercise will in most cases suffice, and in all cases, if begun early and before pronounced deformity appears, together with a proper retentive apparatus. It has been the writer's good fortune to see several cases of spastic paralysis yield to stretching and manipulation with almost complete disappearance of spastic gait and deformity, but it requires patience, perseverence and a great deal of hard work.

In chronic rheumatoid arthritis, faulty decubitus and malpositions, institute that method of reform that will bring about the desired change, and consists in preventing habitual and predisposing positions that lead to deformity. Insist that the patient keeps the limbs extended and if contracture threatens, daily stretching, massage, and, if necessary, the application of splints will retain the extremities in their normal relations to the body.

To genu varus and valgus, I will devote few words, as all know how amenable to treatment these are, if braces are applied before

the end of the third year of age, and some, as late as the fourth year.

Before attempting to treat scoliosis, the causes should be carefully inquired into, and if due to a shortened limb, or a tilted pelvis, a high shoe should be worn. If to faulty position at school, advise a reverse of position in writing, or the erect posture. If rachitic, proper medication and special exercise, together with application of either a Shaffer brace, a Knight, an aluminum or a plaster of paris corset. Most disfiguring and painful deformities follow neglect of these methods, whereas, if carefully attended to in its incipiency, a perfect cure can be brought about.

Flat-foot from any cause should be treated seriously, less it cause untold suffering and inconvenience. The application of a steel insole, of which the writer has found no better model than that devised by Dr. Royal Whitman, will often cause a disappearance of pain and disability that is almost magical. Cases of the most painful and deforming flat-foot with marked displacement of the astragalus and scaphoid bones following sprains have been referred to the writer and have required months of treatment to correct, which had the parts been put at rest and the foot retained in a position of varus would have been entirely prevented. I feel I cannot impress this point too forcibly, as I know there is too great a tendency on the part of medical men to deal lightly with this form of injury.

Congenital dislocation of the hip, easily amenable if treated in time, becomes hopeless if neglected, and while not a severe deformity, it renders the one so afflicted less able to earn a livelihood at a standing occupation than her more fortunate sister. It has been the writer's good fortune to have successfully performed the "Lorenz" operation for the relief of this deformity on five cases, and hope at the next meeting to report these cases, with photographs and X ray pictures.

I know of no deformity more susceptible of cure than congenital club-foot when seen early. Repeated stretching of the contracted muscles and the application of the proper retentive apparatus will bring about a perfect result and prevent humiliation and such spleenish utterance as has been attributed to the well-known poet, Lord Byron. Daily stretching until the feet can be put into a Valgus position, then they should be over corrected, put up in plaster of Paris, and so retained until child is able to walk, when a varus ankle brace should be applied.

Deformities following tuberculous arthritis:

The severe flexions following this disease should in every case be prevented by an early diagnosis and the application of an extension and stilting apparatus.

It is unfortunate and much to be regretted that many cases do not reach the hands of the orthopedic surgeon until so much change has taken place through the destruction of bone and soft parts, so much alteration in the normal relation, that permanent disability must remain, and, though much can be done in extreme cases to improve the condition, yet complete obliteration of the marks of neglect is not accomplished, and the patient is consigned to a life of moral as well as physical suffering.

The responsibility for this state of affairs rests mainly upon the shoulders of the family physician, for it is to him the mother first takes her child, and it is to him that this paper is chiefly directed.

You who are called, at more or less frequent intervals, into the family fold, should be in a position to detect these abnormalities in their incipiency, and to impress upon the mind of the parent the sad afflictions, the inconvenience and mental suffering that may follow neglect in applying the proper preventive treatment before pronounced deformity appears.

INTRODUCTORY NOTE.

It will be remembered that all members of the society were invited to meet on the evening before the opening of the last annual session to consider the proposed new constitution and by-laws. At that meeting many changes were suggested. The committee on revision endeavored to make these changes, but owing to the limited time (a few hours only before presentation to the Society) it failed to entirely and properly incorporate them, and as a consequence the instrument as adopted was afterwards found to be very imperfect from omissions, repetitions and inaccuracies of expression.

The committee on publication, after consultation with the former committee on revision, has corrected these very apparent errors without making any essential changes in the main features or requirements of the constitution and by-laws as adopted. This action has been approved by the Board of Trustees, and by their order these instruments as corrected are printed below. The action of the Commitee will also be presented to the Society for its approval at the next annual meeting.

PUBLICATION COMMITTEE.

CONSTITUTION.

ARTICLE I.

CONSTITUTION.

NAME.--The name and title of this organization shall be "The Medical Society of New Jersey."

ARTICLE II.

PURPOSE OF THE SOCIETY.

OBJECT.—The purpose of this society shall be: First—To federate and organize the medical profession of the State of New Jersey. Second—To unite with similar organizations of other States, to compose the American Medical Association. Third—To advance medical science and elevate professional character. To safeguard the material interests of the profession and promote friendly relations among its members. To educate the public in preventive medicine and hygiene; and in all to render the medical profession most capable in its service to humanity.

ARTICLE III.

COMPONENT SOCIETIES.

The Component Societies shall consist of County Medical Societies which hold charters from the Medical Society of New Jersey.

ARTICLE IV.

COMPOSITION OF THE SOCIETY.

SECTION 1.—The Medical Society of New Jersey shall be composed of members in good standing of the component Societies, and shall be designated as fellows, officers and delegates.

SEC. 2.—(a) Fellows of the Medical Society of New Jersey shall consist of the ex-presidents.

(b) *Officers.*—The officers of the Medical Society of New Jersey shall be a president, three vice-presidents, a corresponding secretary, a recording secretary, a treasurer and a board of trustees.

(c) *Delegates.*—Delegates shall be permanent, annual and associate.

PERMANENT DELEGATES.

SEC. 3.—At the annual meeting of each component society in 1906, and at every third annual meeting thereafter, and at no other time, except in cases where vacancies occur as specified in the last paragraph of this section, each component society may, by individual ballot, by a three-fourths vote of the members present, select one nominee for permanent delegate to the Medical Society of New Jersey, and component societies having thirty or more members may also, every third year, select in the same manner, one additional nominee for every thirty members or major fraction thereof, provided, that every such nominee shall have been a member in good standing of a component society for five years; and provided that no component society shall be entitled to more permanent delegates than one-tenth of its regularly certified membership; and when, from any cause, this number is exceeded, the component society having such excess shall not be privileged to select nominees for permanent delegates until this disproportionate representation shall have ceased to exist; provided, further, that each nominee shall present a certificate signed by the president and secretary of his component society in the following form:

.....N. J.,..... .....190..

This is to certify that.....M. D., was nominated for permanent delegate to the Medical Society of New Jersey, on the..... ....day of.....190.., by the component society of the County of.....according to the requirements of the constitution and by-laws of the Medical Society of New Jersey.

The house of delegates shall have the power to elect or reject any nominee for permanent delegate and a three-fourths vote by ballot of all members present shall be necessary to the election of a permanent delegate to the Medical Society of New Jersey.

The following classes of permanent delegates shall be deprived of their privileges as permanent delegates, and their names, after having been announced to the Society by the secretary, and without any accompanying defense or satisfactory excuse, shall be stricken from the roll:

1st. Those who lose their membership in their respective component societies.

2d. Those who have failed to attend two consecutive annual meetings of the Medical Society of New Jersey. All excuses for absence shall be made in writing to the judicial council, and its decision shall be final.

All permanent delegates whose component societies are in arrears for dues to the Medical Society of New Jersey shall be suspended from all the privileges of this society until such arrears are paid.

After the death of a permanent delegate or a nominee for permanent delegate, the secretary of the component society of which said delegate or nominee was a member shall send formal notice of such death to the recording secretary of the Medical Society of New Jersey, and said recording secretary shall thereupon notify said component society, through its secretary, that it may select at its next annual meeting (or at a meeting specially called for this purpose) a nominee to fill the vacancy. The names of all permanent delegates stricken from the roll shall be reported by the recording secretary of the Medical Society of New Jersey to the secretaries of the component societies which they respectively represented, and said component societies may select at their next annual meeting nominees to fill these vacancies.

ANNUAL DELEGATES.

SEC. 4.—(*a*) The annual delegates to the Medical Society of

New Jersey shall be elected at the annual meeting of the component societies in accordance with requirements of the constitution of this society, and shall with the permanent delegates and reporters, represent their respective component societies in the house of delegates.

(*b*) Each component society shall send each year to the house of delegates of the Medical Society of New Jersey one annual delegate for every twenty-five members (or major fraction thereof) reported to the recording secretary; provided the said component society shall have made its annual report and have paid its annual assessment as provided in this constitution and by-laws. Nothing, however in this section shall debar any component society from having at least one annual delegate.

(*c*) In the absence of an annual delegate of a component society in good standing, the presiding officer of the Medical Society of New Jersey may, on the recommendation of the members present from the said component society, publicly fill the vacancy from among the associate delegates of said society, and such alternate shall have all the rights of an annual delegate.

ASSOCIATE DELEGATES.

SEC. 5.—All members of component societies in good standing, not otherwise included in the membership of the Medical Society of New Jersey, are hereby constituted associate delegates, and may participate in all the privileges of the general sessions.

PRIVILEGED MEMBERS.

HONORARY MEMBERS.

SEC. 6.—Honorary members shall be physicians and surgeons who have attained distinction in the profession, and may be elected by a two-thirds vote of the house of delegates; provided, they shall have been recommended for election by the committee on honorary membership; and provided further, that the number of living honorary members shall not exceed fifteen. They shall have the privilege of discussing all scientific questions presented at the sessions of the society.

GUESTS.

SEC. 7.—Any physician, resident or non-resident of this State, may upon invitation of the society or of the house of delegates, become a guest during the annual meeting, and shall be accorded the privilege of participating in the scientific work of the society.

ARTICLE V.

HOUSE OF DELEGATES.

SECTION 1.—The house of delegates shall be the legislative body of the Medical Society of New Jersey.

SEC. 2.—Members of the house of delegates shall consist of the fellows, officers of the society, permanent and annual delegates, reporters, councillors and chairmen of the standing committees.

ARTICLE VI.

BOARD OF TRUSTEES.

SECTION 1.—The board of trustees shall be the executive body of the society and shall be composed of the fellows, the president, the first vice-president and the recording secretary.

ARTICLE VII.

SECTIONS.

SECTION 1.—The house of delegates may provide for the division of the scientific work of the Medical Society of New Jersey into appropriate sections, when the necessity for such division arises, subject to the approval of the board of trustees.

SEC. 2.—The house of delegates shall organize councillor districts within the State. Said districts shall be composed of three or more component societies. The house of delegates shall elect a councillor from each district, which councillors collectively shall constitute the judicial council.

ARTICLE VIII.

MEETINGS.

SECTION 1.—The Medical Society of New Jersey shall hold an annual meeting, during which there shall be held daily not less than one general session, which shall be open to all registered members.

SEC. 2.—The time and place for holding the annual meeting shall be fixed by the house of delegates for each succeeding year. The board of trustees may change the time and place of meeting when deemed necessary.

ARTICLE IX.

OFFICERS.

SECTION 1.—All officers except the secretaries, treasurer and members of the board of trustees, shall hold office for one year only, or until their successors are elected. Members of the board of trustees, except the first vice-president and recording secretary, may hold office so long as they are members in good standing in this society.

SEC. 2.—The officers of the Medical Society of New Jersey, except the board of trustees, shall be elected by the house of delegates in the afternoon of the second day of the annual meeting, by ballot (a majority of the votes cast being necessary to an election), it being hereby provided that no member shall be eligible to more than one office at the same time except the president, the first vice-president and recording secretary, who, by virtue of their office, are members of the board of trustees. And it is further provided that all nominations to fill vacant offices occurring during the interim between the annual meetings by reason of death, resignation, misconduct, removal from the state or otherwise, shall be made by the board of trustees at the opening of the first session, and the election of said officers shall immediately follow.

ARTICLE X.

FUNDS AND EXPENSES.

SECTION 1.—Funds for meeting the current expenses of the Medical Society of New Jersey shall be provided for by an equal per capita assessment upon each component society, by donations, by sales of its publications, and from miscellaneous revenue. During the annual meeting funds may be appropriated by the house of delegates subject to the approval of the board of trustees for the expenses of the annual meeting, for publications, for expenses of officers and committees, but for no other purposes, unless authorized by a two-thirds vote of the house of delegates and approved by the board of trustees.

SEC. 2.—The board of trustees may incur any necessary expense *ad interim*.

ARTICLE XI.

SEAL.

The seal of the Medical Society of New Jersey heretofore adopted shall continue, until otherwise ordered, to be the seal of this society.

ARTICLE XII.

AMENDMENTS.

The house of delegates may amend any article of this constitution by a two-thirds vote of the members present (not less than fifty) at any annual meeting, provided, that such amendment shall have been submitted in writing at a previous annual meeting, and that it shall have been officially sent to each component society at least one month before the annual meeting at which final action is to be taken.

BY-LAWS.

CHAPTER I.

MEMBERSHIP.

SECTION 1.—The fellows and officers of, the delegates (permanent and annual) to, the Medical Society of New Jersey, are members, by act of incorporation; associate delegates, honorary members and guests by privilege of the constitution.

SEC. 2.—The secretary of each component society shall furnish to the recording secretary of the Medical Society of New Jersey, at least one month before the annual meeting, a certified roster of its total enrolled membership; a list, as complete as possible, of all non-affiliating physicians in the county; a list of its officers, annual delegates and reporter; also a list of the members who have paid their assessments and are otherwise in good standing, which latter list shall be *prima facie* evidence of their right to register at the annual meeting, and shall form the basis of representation for the component society.

SEC. 3.—No person who is under sentence of suspension or expulsion from any component society of the Medical Society of New Jersey, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or privileges of this society, nor shall the said member be permitted to take part in any of its proceedings, until such time as said member shall have been relieved of such disability.

SEC. 4.—All members and delegates in attendance at the annual meeting of this society shall write their names and addresses in the registration book, and failing so to do shall be considered as absent.

SEC. 5.—All annual delegates of the Medical Society of New Jersey shall produce a certificate of election at each annual meeting, signed by the president and secretary of the component society which they respectively represent; and no annual delegate will be permitted to sit as a member of the house of delegates without said certificate, nor unless the component society from which he is a delegate shall have paid its annual assessment.

SEC. 6.—When a member's right to membership has been verified by the committee on credentials, the said member shall receive a certificate, which certificate shall be evidence of his right to the privi-

leges of membership. No member or delegate shall be permitted to take any part in the proceedings of this society until the provisions of this chapter have been complied with.

CHAPTER II.

ANNUAL AND SPECIAL MEETINGS.

SECTION 1.—The Medical Society of New Jersey shall hold an annual meeting at such time and place as may be fixed by the house of delegates or by the board of trustees.

SEC. 2.—Special meetings of the Medical Society of New Jersey or of the house of delegates shall be called by the president upon the petition of twenty or more members representing four or more component societies, or upon the request of the board of trustees.

CHAPTER III.

GENERAL MEETING.

SECTION 1.—A general meeting shall include all registered members, honorary members and guests, all of whom shall have equal rights to participate in the proceedings. The president shall preside over all meeetings, or, in his absence, or disability, or by request, the vice-president in the order of seniority shall preside. The president's and third vice-president's annual addresses shall be delivered before the general meeting as shall be arranged for in the official programme.

SEC. 2.—The general meeting may create committees for scientific investigations of special interest or importance to the profession or public, and may receive and dispose of reports of the same, but no expense shall be incurred in connection therewith until recommended by the house of delegates and approved by the board of trustees.

SEC. 3.—The order of exercises, papers and discussions as set forth in the official programme shall be followed from day to day until completed, unless otherwise ordered by the society.

SEC. 4.—No address delivered or paper read before the Medical Society of New Jersey, with the exception of those delivered by the president, the third vice-president and invited orators, shall occupy more than twenty minutes in its delivery or reading, and no member shall speak longer than five minutes, nor more than once, on any subject unless by permission of the society.

SEC. 5.—All papers and reports presented to the society shall be its property, and any author failing to deposit the same with his name

with the recording secretary when read may be debarred from having his paper published in the Transactions. Permission to publish the same in medical journals may be granted by the committee on publication.

CHAPTER IV.

HOUSE OF DELEGATES.

SECTION 1.—The house of delegates shall meet annually at the time and place of the annual meeting of the Medical Society of New Jersey, and shall arrange its sessions so as not to conflict with the general meetings of the society, nor with the sessions held for the president's and third vice-president's addresses and for the annual orations. The house of delegates may meet in advance of, with, or remain in session after the final adjournment of the annual meeting.

SEC. 2.—Twenty annual delegates, representing at least four component societies in good standing, shall constitute a quorum, and all of the meetings of the house of delegates shall be opened to the members of the Medical Society of New Jersey, but only members of the house of delegates shall have a right to vote.

SEC. 3.—The house of delegates shall consider the reports of all component societies, and shall have authority to make such recommendations and adopt such measures as they may deem most efficient for building up and increasing the interest in societies already existing; to organize the profession in counties where affiliated societies do not exist, and to issue charters as hereinafter provided.

SEC. 4.—The house of delegates shall have authority to appoint committees for special purposes from among the members of the Medical Society of New Jersey, and such committees may report to the house of delegates in person and participate in the debates thereon.

SEC. 5.—The house of delegates or board of trustees shall approve all memorials and resolutions issued in the name of the Medical Society of New Jersey before the same shall become effective.

CHAPTER V.

ELECTION OF OFFICERS.

SECTION 1.—All elections shall be by ballot and a majority of the votes cast shall be necessary to elect.

SEC. 2.—On the first day of the annual meeting the president shall

ask all delegates present from each component society to meet at the close of the first session to elect a member to the nominating committee and to notify the recording secretary of the member so elected, and these members, together with the fellows, shall constitute the nominating committee. This committee shall report the result of its deliberations to the house of delegates in the form of a ticket containing the names of one or more members for each of the offices to be filled at that annual meeting, also nominees for standing committees, councillors for the different districts, delegates to the American Medical Association and to corresponding state medical organizations.

SEC. 3.—The report of the nominating committee, and the election of officers, standing committees, councillors, delegates to the American Medical Association, and the corresponding state medical organizations, for the ensuing year, shall be the first order of business of the house of delegates in the afternoon of the second day of the annual meeting.

SEC. 4.—Nothing in this chapter shall be construed to prevent additional nominations being made by members of the house of delegates.

CHAPTER VI.

DUTIES OF OFFICERS.

SECTION 1.—The president shall preside at all meetings of the Medical Society of New Jersey and of the house of delegates, preserve order and decorum in debate, give a casting vote when necessary, appoint all committees not otherwise provided for, order reports, enforce the observance of the by-laws, and perform such other duties as custom and parliamentary usage may require. He shall also deliver an annual address at such time and place as may be arranged for by the programme committee; shall fill all vacancies made in the offices except that of treasurer of the society during the interim by reason of death, resignation, or removal from the state, and all persons so appointed shall serve until the next annual meeting, when all vacancies so filled by *ad interim* appointments shall be regularly filled by the house of delegates as provided for in Article IX, Section 2, of this constitution.

SEC. 2.—The vice-presidents shall assist the president in the discharge of his duties, and in the absence or disability of the president the vice-president in order of seniority, shall preside at all meet-

ings of the Medical Society of New Jersey and of the house of delegates, and perform all of the duties pertaining to the office. In case of vacancy in the office of the president during the interim by death, resignation, or removal, the vice-president in order of seniority shall perform all the duties pertaining to the office of president during the interim until the first succeeding annual meeting thereafter.

SEC. 3.—The third vice-president shall prepare and read an essay upon some medical or allied subject at the first annual meeting subsequent to his election.

SEC. 4.—The treasurer shall give bond for the trust reposed in him as required by the board of trustees. He shall demand, receive and preserve all funds due the Medical Society of New Jersey, together with bequests and donations; keep a correct list of the same, together with the name of the respective donors. He shall not pay any moneys out of the treasury except by the written order of the president, approved by the board of trustees. His accounts shall be subject to an examination by an auditing committee appointed from the board of trustees at such times as they or the house of delegates may order, and he shall annually render a full statement of all the transactions of his office at the annual meeting of this society. He shall charge upon his books the assessment against each component society at the end of the fiscal year, collect and make proper credits for the same, and perform such other duties as may be assigned to him.

SEC. 5.—It shall be the duty of the board of trustees to annually organize by electing a chairman and secretary; to exercise a general supervision over the affairs of the society, with authority to recommend and to act for its betterment whenever opportunity offers; to keep full minutes of all meetings; to give to the house of delegates a summarized brief of its proceedings and recommendations, and to yearly publish in the Transactions a full report of the same; to require and hold the official bond of the treasurer for the faithful execution of his duties; to annually audit and authenticate his accounts, and to include a statement of the same in the general report. The board of trustees shall have authority to advise in the deliberations of the several standing committees, and especially to supervise the duties and labors of the publication committee, and, when necessary, to appoint an editor and such other assistants as the demands of the society may require; to refer and otherwise dispose of all business properly arranged for its disposition; to lease

sell or otherwise convey or dispose of any or all property of the Medical Society of New Jersey, both personal and real, and execute therefor, good and sufficient lease, deed or other conveyance; to determine all salaries, to pass upon all recommendations, and order all necessary expenditures for the society. In the event of a vacancy in the office of treasurer by death, or otherwise, the board of trustees shall select one of its members to fill the vacancy.

SEC. 6.—The recording secretary shall have custody of the constitution and by-laws, and of the records of this society and of the house of delegates; shall attend the meetings, record the proceedings, and give notice of all the regular and special meetings of this society and of the house of delegates. He shall notify the chairman of each committee of his election or appointment, with the names of his associates, together with the subject referred to the committee, furnish delegates to the American Medical Association and corresponding state medical organizations, with proper credentials, demand and receive from the component societies a copy of the proceedings of their first meeting, file the same among the archives of this society, and perform such other duties as may be assigned him by the house of delegates. He shall keep a record of the election of all permanent delegates, and report to the state society each year which component societies are entitled to additional permanent delegates, and the number, and shall also report the names of all such delegates as shall have forfeited their membership. He may employ assistance when authorized by the house of delegates or by the board of trustees.

SEC. 7.—The corresponding secretary shall have charge of, and custody over, all letters and communications transmitted to this society, and shall keep a verbatim copy of all communications sent out in the name of the society. It shall be his duty, agreeable to the directions of the society, to write and answer letters, and to manage the general correspondence of the Medical Society of New Jersey and to report thereon to the society at its next annual meeting. He shall transmit to the secretaries of the several component societies information upon such subjects as have been acted upon in this society relative to their respective interests, and notify the honorary members of their election to this society; transmit to them a copy of the constitution and by-laws; provide for, and take temporary charge of, the registration of all members, delegates and guests at the annual meeting; preserve all records until relieved of them by the society,

and perform such other duties as may be required by his office or assigned to him by the society.

CHAPTER VII.

REPORTERS.

Each component society shall elect one of its members a reporter, whose duty it will be to furnish to the committee on scientific work a brief and intelligent report of important transactions of his society, of special extracts from papers read, of interesting cases reported, and of the prevalence of contagious and other diseases in the county, of the removal of any member from the society by death or otherwise, and of the members elected during the year; also general information of importance to this society. The reporter will forfeit his right to a seat in the house of delegates, and no credit will be given to him by the committee on scientific work, unless his report is received at least thirty days before the annual meeting of the Medical Society of New Jersey.

CHAPTER VIII.

COUNCILLORS.

SECTION 1.—The councillors shall be regularly nominated by the nominating committee and elected by the house of delegates.

SEC. 2.—Collectively, the council shall be composed of the councillors of the Medical Society of New Jersey, and constitute a board of censors of this society known as the judicial council. The council shall consider all questions involving the rights of members, whether in relation to each other, to members of other societies, or to the members of this society. All questions of an ethical nature and excuses from permanent delegates shall be referred to this council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members, and shall decide all appeals taken from the decision of an individual councillor. Its decision in all such cases shall be final.

SEC. 3.—The judicial council of the Medical Society of New Jersey may hold daily sessions during the annual meeting of the society, and at such other times as necessity may require, subject to the call of the chairman, or upon the petition of three councillors. It shall meet on the last day of the annual meeting of the society for reorganization and for the outlining of the work for the ensuing year. At this meet-

ing it shall elect a chairman and secretary, and shall keep a permanent record of its proceedings, and through its chairman make an annual report to the house of delegates.

SEC. 4.—Each councillor shall visit each component society in his district at least once a year, for the purpose of inquiring into the condition of the profession and for improving and increasing the zeal of the society in its scientific work. He shall make an annual report to the house of delegates of the condition of the profession in each component society in his district. The necessary travelling expenses incurred by said councillors in the line of the duties herein imposed may be allowed by the house of delegates upon the presentation of the proper itemized statement.

CHAPTER IX.

COMMITTEES.

SECTION 1.—The standing committees shall be as follows:

(*a*) TO BE ELECTED.

Committee on
- Arrangements.
- Nominations.
- Programme.
- Scientific work.
- Public hygiene and legislation.
- Publication.

(*b*) TO BE APPOINTED.

Committee on
- Credentials.
- Business.
- Honorary membership.

COMMITTEE ON ARRANGEMENTS.

SEC. 2.—The committee on arrangements shall consist of five members who shall be regularly nominated and elected, three of whom may be named from the component society of the county in which the next annual meeting is to be held. The president and recording secretary are *ex-officio* members of this committee.

It shall be the duty of this committee to provide suitable accommodations for the meeting places of the society, viz.: The general session, house of delegates, board of trustees, the various committees and exhibits. This committee shall have charge of all matters and details pertaining to the general arrangements, and shall have power to enlarge by creating sub-committees as necessity or urgency may require.

The chairman shall report in writing an outline of the arrangements to the president for his approval, and subsequently to the chairman of the programme committee for publication, and shall make announcements during the sessions as occasion requires.

PROGRAMME COMMITTEE.

SEC. 3.—The programme committee shall consist of the recording secretary as chairman, and two additional members (one of whom after the first year shall be elected annually) for two years. It shall be the duty of this committee, after receiving the titles, together with brief abstracts of the papers to be read, with author's names attached, to prepare and issue a programme announcing the order in which the papers, discussions and all matters of business are to be presented, which order shall be followed as nearly as practicable. All papers must be announced to the chairman of the committee thirty or more days before the annual meeting.

NOMINATING COMMITTEE.

SEC. 4.—The nominating committee shall be selected on the first day of the annual meeting, as provided in Chapter V, Section 2, and shall perform the duties therein assigned, and such others as may be referred to it by the house of delegates.

COMMITTEE ON SCIENTIFIC WORK.

SEC. 5.—The committee on scientific work shall consist of three members, one of whom, after the first year, shall be annually elected for three years.

This committee shall present at each annual session a summary report of the proceedings and recommendations of the respective component societies, together with the incidents and legal decisions of professional interest, and of special progress made. It shall arrange symposia upon subjects of its own selection; invite special orators to read essays or deliver orations from time to time, and otherwise extend the interests and scientific work of the society as it may elect, and report to the programme committee at least thirty days before the annual meeting.

COMMITTEE ON PUBLIC HYGIENE AND LEGISLATION.

SEC. 6.—The committee on public hygiene and legislation shall be composed of six members. After the first year, two members shall be elected annually to serve for three years. It shall be the duty of this committee to look after all matters, hygienic and legislative, which shall

be referred to it by the house of delegates, and to annually hold at least one meeting, at which each component society may make known its recommendations through its reporter; and a summary of the same shall be formulated and presented to the house of delegates. The president and recording secretary shall be *ex-officio* members of this committee.

COMMITTEE ON PUBLICATION.

SEC. 7.—The committee on publication shall consist of the recording secretary, as chairman, and two other members, who shall be elected annually. All reports, papers and discussions may be referred to this committee for publication, but the committee shall have authority to curtail such documents or to print abstracts thereof, and may return to the author any paper deemed by them unsuitable for publication in the Transactions, with reasons for non-publication. The committee shall have authority to publish and distribute the annual Transactions.

CHAPTER X.

COMMITTEES TO BE APPOINTED.

COMMITTEE ON CREDENTIALS.

SECTION 1.—The committee on credentials shall consist of three members, *viz.*: corresponding secretary, treasurer, and one member to be appointed by the president. It shall be the duty of this committee to examine all credentials and certificates presented by members and delegates, and when found in accordance with the requirements of Article IV., Sections 1 to 7, and Chapter I., Sections 2 to 6, inclusive, of the constitution and by-laws of this society, to issue to each, individually, a certificate or badge which, when regularly presented, shall be evidence of their right to membership. This committee shall keep a record of all issues, together with the names and addresses of the delegates and members, and compare the same with the roster from the respective component societies.

THE BUSINESS COMMITTEE.

SEC. 2.—The business committee shall be composed of five members of the house of delegates, appointed by the president. Any questions or business before the society or the house of delegates for consideration may be referred to the business committee for subsequent report or recommendation.

COMMITTEE ON HONORARY MEMBERSHIP.

SEC. 3.—The honorary membership committee shall be composed of three fellows appointed annually by the president, whose duty it shall be to inquire into the standing and qualifications of all nominees for honorary membership in this society, and report the same with their recommendations to the house of delegates at the next annual meeting of the society.

CHAPTER XI.

SECTION 1.—Any officer of this society, for sufficient reason, may resign his office, or he may be removed therefrom by order of the house of delegates when guilty of neglect of duty, improper conduct, or upon violation of the constitution and by-laws. In either or all cases, the society shall fill the vacancy so made as provided for in Article IX. of the constitution, Chapter V. and Chapter VI., Section 1, of the by-laws.

CHAPTER XII.

ASSESSMENTS AND EXPENDITURES.

SECTION 1.—An assessment of two dollars per capita on the membership of the component societies is hereby made the annual dues of this society. Thirty days before the annual meeting of the Medical Society of New Jersey, the treasurer of each component society shall forward to the treasurer of this society the amount of its assessment with a list of the members who have paid their assessments and are otherwise in good standing.

SEC. 2.—Any component society which fails to pay its assessments or to make the reports as required in this constitution and by-laws shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the society (unless the disability be removed by the house of delegates) until all requirements have been satisfied.

SEC. 3.—All motions or resolutions appropriating money not hereinbefore provided for shall specify a definite amount, or so much thereof as may be necessary for the purposes indicated, and must be recommended by the house of delegates and approved by the board of trustees.

CHAPTER XIII.

RULES OF CONDUCT.

The "principles of medical ethics" adopted by the American Medical Association shall govern the conduct of the members of this society in their relations to each other and to the public.

CHAPTER XIV.

RULES OF ORDER.

The deliberations of the Medical Society of New Jersey shall be governed by parliamentary usage as contained in Roberts' "Rules of Order," unless otherwise determined by a two-thirds vote of its respective bodies.

CHAPTER XV.

COMPONENT SOCIETIES.

SECTION 1.—All county medical societies of the state of New Jersey which shall adopt the principles of organization in accord with this constitution and by-laws, may, upon application to the house of delegates, receive a charter from and thereby become a component society in affiliation with the Medical Society of New Jersey.

SEC. 2.—Charters shall be issued only upon the order of the house of delegates after approval by the board of trustees, and shall be signed under seal by the president and recording secretary of this society. Upon the recommendation of the house of delegates, the board of trustees may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this constitution and by-laws.

SEC. 3.—There can be but one component medical society chartered in any county in this state.

SEC. 4.—Each component society shall judge of the qualifications of its own members, but as such societies are the only portals to the Medical Society of New Jersey, and also to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree to practice non-sectarian medicine, shall be eligible to membership in a component society when regularly qualified.

SEC. 5.—Any physician who may feel agrieved by the action of the component society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal through his district councillor to the board of councillors.

SEC. 6.—When hearing appeals, a councillor or the judicial council may admit written or oral evidence, but in all cases efforts at conciliation should precede such hearings.

SEC. 7.—When a member in good standing in a component society moves to another county of this state, his name, upon request, may be transferred to the roster of the component society in whose jurisdiction he moves.

SEC. 8.—Any physician living in or near a county line may hold his membership in the component society most convenient for him to attend, on permission from the component society in whose jurisdiction he resides.

SEC. 9.—The secretary of each component society, in addition to that of its own members, is recommended also to keep a list of non-affiliating, registered physicians of the county, with full name, address, college and date of graduation and date of license to practice in this state, together with such other information as may be deemed important to the society. He shall furnish an official report containing such information upon blanks supplied him for the purpose, by the secretary of this society, when requested to do so. The roster kept should indicate any changes in the personnel of the profession by death, removal to, or from the county, or by withdrawal from the society, and in making such a report he should endeavor to include an account of every physician who has lived, or is now living, in the county during the year.

CHAPTER XVI.

REGULATIONS CONCERNING THE DEGREE OF DOCTOR OF MEDICINE.

SECTION 1.—Candidates for the degree of *Medicinæ Doctor*, may apply to any district society of this state, and shall be admitted to examination under the following rules and regulations:

1st.—Each district society shall appoint annually, or *pro re nata*, a committee of not less than five members, who shall conduct the examinations.

2d.—All examinations shall be in the presence of the society at a regular meeting; and no candidate shall be examined until he has given satisfactory evidence of having reached the age of twenty-one years, is of good moral character, that his preliminary education has

been such as to qualify him for the study and practice of medicine, and has pursued his medical studies in some medical college whose requirements do not fall below the minimum standard of the Association of American Medical Colleges.

3d.—The examination shall extend to all of the branches taught in the medical schools recognized as aforesaid, and the candidate shall then be balloted for by the society. If he shall receive the approving votes of two-thirds of all the members present, the presiding officer shall give a certificate to that effect to the candidate.

4th.—The certificate may be presented at the next or any subsequent regular meeting of this society, not extending beyond the period of three years, with a written thesis upon some medical subject; and if, upon a ballot, they shall be approved by a majority of the members present, the candidate, upon the payment of fifteen dollars, shall be entitled fo receive a diploma in the following form:

Form of Diploma for the degree of Doctor of Medicine.

SOCIETAS MEDICA REIPUBLICÆ NEO-CÆSARIENSIS.

Legibus constituta, omnibus has Literas lecturis.

SALUTEM:

Quoniam A. B. vir ornatus et moribus inculpatus, qui omnibus studiis ad Medicinæ et Chirurgiæ usum scientiamque spectanibus animum fidelitur intendit, et opinionibus hominum faventibus, nobis commendatus est ut ad gradum Doctoris Medicinæ Chirurgiæque proveheretur.

Notum sit quod placet nobis, auctoritate hacce societate, collata inquisitione ejus peritiæ dilligentis sima coram viris selectis et eruditis, secundum leges hujusce societatis, imprimis habita, supradictum A. B. titulo, graduque Medicinæ et Chirurgæ Doctoris adornare, eique omnia jura, privilegia et honores ad istum gradum pertinentia, dedere et concedere.

Reipublicæ Neo-Cæsariensis illum ad gradum honorarium Medicinæ Chirurgiæque Doctoris libentissime provexímus, eique omnia jura privilega et honores ad istum quoquomodo pertinentia, dedimus et concessimus.

In cujus rei majorem fidem et plenius testimonium, sigillo hujusce Societatis, Præsidisque et Scrivæ chirographis hocce Diploma muniendum curavimus.

Datum , *die*——— *anno Domini* ———— *et Societatis.*

PRÆSES

L. S. SOCII.

SCRIBA.

CHAPTER XVII.

AMENDMENTS.

These by-laws may be amended at any annual meeting by a two-thirds vote of the house of delegates, provided, that at least fifty members are present; and provided further, that the amendment shall have been twice read in open meeting and laid upon the table for one day.

REPORT OF STANDING COMMITTEE.

Mr. President:

In response to short circular-letters of inquiry sent to the reporters, replies, more or less extensive, have been received from all of the District Societies with the exception of Hudson, Monmouth, Passaic and Union. All the societies reporting mention the favorable improvement in the attendance, in the interest manifested by contributions and discussions. Essex reports the largest additions, numerically, to its roster, twenty-one members having been added during the year. A plan is under consideration to increase the number of meetings, for the reason, as stated by the reporter, "that we begin to realize that a vast amount of material and experience has been lost by our neglect." Camden has added fourteen, Mercer ten, while smaller numbers have been added in some of the counties whose population is not so numerous. Sussex reports but one meeting held during the year, offering as an excuse that the territory covered and the distance to be traveled render more frequent meeting difficult. May we suggest that the fewer the meetings the less the interest. The seventy-ninth anniversary of this society occurs in May next, and preparations are to be made for the proper celebration of the event. One county reports "the regular meetings have been held, nothing of special interest occurring; no papers read nor cases reported." Probably if this society would follow the custom so universally in vogue, and invite addresses from specialists, it might have the effect of stirring up some latent enthusiasm.

It is a source of felicitation that, after three years of disbandment, Ocean County makes application at this meeting for permission to establish a new district medical society in that county.

At a meeting held in Woodbury, the Tri-County Medical Society, consisting of the medical societies of Cumberland, Gloucester and Salem was organized. The object of this society is the affiliation of the members of the societies mentioned, professionally and socially, and is in line with the plans proposed in the new By-Laws of the State Society now under consideration.

As to diseases most prevalent, one most frequently mentioned is variola, but if the reports are sufficient to form a foundation for an opinion, it has not prevailed so extensively as popular belief would have it. Camden reports eighty-one cases treated in the municipal

hospital with two deaths. Twenty-three cases occurred in New Brunswick, chiefly among the colored population. Somerset and Burlington have had a few cases, and it has prevailed to some extent in Millville and Vineland. Strict quarantine regulations and vaccination have curtailed its spreading. A number of cases of lymphadenitis have arisen in Hunterdon County, and this fact is seized upon by the anti-vaccinationists in support of their opposition, but investigation has not proven it to be so.

Diphtheria is reported from many counties. New Brunswick has had two hundred and fifty-four cases with nine deaths. It also existed extensively in Phillipsburg.

Pneumonia and epidemic influenza are occasionally mentioned, but certainly not to the extent of former years; either other diseases have supplanted them or the epidemics of variola have detracted from their importance.

Typhoid fever has existed more or less extensively. During the height of the season at Atlantic City, in August, 1902, a very serious epidemic occurred there. A painstaking and exhaustive investigation was made by a committee of Atlantic City physicians, and the source of infection was traced to the oysters and clams brought from the waters between Beach Thoroughfare and the ocean, where it is the custom to "lay out" for twenty-four to forty-eight hours. The sale of these articles of diet taken from those waters was strictly prohibited and the epidemic ceased. A very interesting account of this investigation has been published in the *Philadelphia Medical Record*, but as a matter of history of our Society and State, should also appear in our Transactions. Camden, city and county, usually reporting so many cases of typhoid, states that but forty-two cases have occurred.

With so many excellent hospitals in our State, we wish much more definite information were furnished the Society, but, as it is, reports are seldom received from them. The Mercer Hospital, of Trenton, has been enlarged recently, and now has a capacity for one hundred beds. Repairs and additions are now in progress at St. Francis', Trenton, which when completed will cost $60,000. The Newark City Hospital has taken a step to increase its usefulness by appointing Dr. Charles Teeter, as pathologist. It is the expectation of the profession of Newark to establish a medical library in connection with the public library of that city.

A prosperous year is reported for the William Pierson Medical Library at Orange. The medical library in Trenton, so recently established, has added during the year two hundred volumes, making a total of seven hundred on its shelves, with a regular subscription to twelve journals. Frequently lectures on medical and scientific subjects are delivered before the association.

The following papers have been received, with a request for publication in the Transactions:

From Bergen County—"The Imperfect Development of Children, Especially Girls, between the Ages of Twelve and Fourteen," by Dr. Gill Wylie. "Adenoids and Hypertrophied Tonsils," by Dr. F. S. Hallett.

From Camden—"The Effects of the Scarcity of Anthracite Coal and the Use of Its Substitutes upon the Public Health," by Dr. Daniel Strock.

The address of the President of the society.

From Salem—"The Vicissitudes of Doctor's Life," by Dr. E. E. Degroft.

A word in passing as to the publication of papers in the Transactions. This Society has repeatedly ordered that papers which have previously appeared in public print were not entitled to recognition in the Transactions, nor can papers forwarded by societies, and having been read before them, appear in the Transactions, unless of special merit. This decision rests with each member of the Committee on Publication, to whom is assigned his share of the reports and papers sent to chairman of the Standing Committee for criticism and revision.

The profession of Atlantic City have taken legal action against one "Dr." H. Walter, who is alleged to be issuing diplomas from the school of Mechano-Neural Therapy without being legally licensed to do so. The case is expected to come before the September term of court.

The inroad to our ranks made by death have been greater than in 1902. From our numbers the following have been taken:

Atlantic County—Theophilus H. Boysen. Born, Rigarsville, O., Jan. 14, 1854; died, Egg Harbor City, March 12, 1903.

Bergen County—A. L. Vandewater.

Burlington—W. L. Martin. Born, Chester Co., Pa., Jan. 22, 1827; died, Rancocas, Jan. 22d, 1903.

Camden—James M. Ridge. Born, Bucks Co., Pa., 1826; died, Camden, Jan. 30, 1903.

Cape May—Walter S. Leaming. Born, Seaville, March 4, 1854; died, Cape May, March 29, 1903. Isaac M. Downs. Born, Berlin, Dec. 5, 1841; died, Cape May Court House, March 1, 1903.

Cumberland—Joseph Sheppard. Born, Bridgeton, June 28, 1823; died, Bridgeton, October 23, 1902.

Essex—Frederick William Thum. Born, Servia, April 24, 1865; died, Newark, June 27, 1902. Henry M. Smith. Born, Meredith, N. Y., Feb. 3, 1847; died, South Orange, Nov. 28, 1902. Arthur Ward. Born, Belleville, Dec. 22, 1823; died, Newark, July 6, 1902. Robert Morris Sutphen. Born, Plainsboro, April 2, 1819; died, Newark, Sept. 2, 1902.

Mercer—William D. Struble. Born, Branchville, Aug. 19, 1860; died, August 28, 1902.

Middlesex—Nicholas Williamson. Born, March 9, 1845; died, August 15, 1902.

Sussex—Carlos Allen. Born, Huntingdon, Sept. 18, 1814; died, Vernon, Feb. 19, 1903. Sidney E. Strahley. Born, Huntsville, Sept. 28, 1861; died, Newton, April 15, 1903.

Appropriate obituaries accompany most of these notices.

Respectfully submitted,

H. W. ELMER, *Chairman.*

ADDENDUM

TO

REPORT OF STANDING COMMITTEE.

In Memoriam.

THEOPHILUS H. BOYSEN, M.D.,

Born January 14, 1854.
Died March 12, 1903.

ALBERTUS LYMEN VANDEWATER, M. D.,

Born 1850.
Died March 2, 1903.

W. L. MARTIN, M.D.,

Born February 19, 1827.
Died January 22, 1903.

JAMES M. RIDGE, M.D.,

Born 1826.
Died January 30, 1903.

WALTER S. LEAMING, M.D.,

Born March 4, 1854.
Died May 29, 1903.

In Memoriam.

ISAAC M. DOWNS, M.D.,

Born December 5, 1841.
Died March 1, 1903.

JOSEPH SHEPPARD, M.D.,

Born June 28, 1823.
Died October 23, 1902.

FREDERICK WILLIAM THUM, M.D.,

Born April 24, 1865.
Died June 27, 1902.

HENRY M. SMITH, M.D.,

Born February 3, 1847.
Died November 28, 1902.

ARTHUR WARD, M.D.,

Born December 23, 1823.
Died July 6, 1902.

In Memoriam.

ROBERT MORRIS SUTPHEN, M.D.,

Born April 2, 1819.
Died September 2, 1902.

WILLIAM D. STRUBLE, M.D.,

Born August 19, 1860.
Died August 28, 1902.

NICHOLAS WILLIAMSON, M.D.,

Born March 9, 1845.
Died August 15, 1902.

CARLOS ALLEN, M.D.,

Born September 18, 1814.
Died February 19, 1903.

SIDNEY B. STRAHLEY, M.D.,

Born September 28, 1861.
Died April 15, 1903.

OBITUARIES.

THEOPHILUS HENRY BOYSEN, M.D.

Dr. Theophilus Henry Boysen was born January 14, 1854, at Rigarsville, Tuscurawas Co., Ohio, and died at Egg Harbor City, N. J., March 12, 1903, from valvular heart trouble. His father, Dr. Otto Boysen, practiced his profession for nearly 17 years at Rigarsville, when the family moved to Buffalo, N. Y. Theophilus later entered the medical department of the University of Buffalo, from which institution he graduated in 1874. He practiced his profession for two years at this place, when he removed to Egg Harbor City, N. J., where, through his energies and ability, he soon secured a large and lucrative practice. Dr. Boysen was also an active worker for the welfare of the town. In 1878 he was elected school trustee. In 1879 coroner of the county, serving three years, and two terms as school superintendent. In 1884 was elected mayor, serving three years in succession, and again in 1891 for a term of three years. Dr. Boysen was one of the charter members of the Atlantic County Medical Society, and was chosen its secretary; he subsequently became its president, and in 1896 a permanent delegate to the State Medical Society. He was also a member of the American Medical Association.

Dr. Boyson was for many years the president of the Aurora Singing Society, the first of its kind organized in South Jersey. He was also secretary of the Egg Harbor Building and Loan Association, and was one of the city's most progressive citizens.

ALBERTUS LYMEN VANDEWATER, M.D.

After a brief illness, the fatal termination of which will be lamented by all who knew him, Dr. Albertus Lymen Vandewater, medical director of the Provident Savings Life Assurance Society, died of pneumonia on March 2d, 1903. Dr. Vandewater's successful career in the medical branch of the life insurance business, which extended over a period of many years, won for him the high esteem of his many friends.

Dr. Vandewater was born in Brooklyn, N. Y., in 1850. He was a graduate of the Bellevue Hospital Medical College, and served three and a half years as house surgeon of the old Center Street Hospital. He was later physician to the Brooklyn Bridge Construction Company.

Beginning in 1878, Dr. Vandewater practiced his profession with great success in Bay Shore, L. I., for about eight years.

Becoming interested in life insurance, he then took up that work as medical inspector for the Equitable. Later he was made assistant medical director of that company. After serving some years in this capacity, and displaying unusual aptitude for this line of work, he became medical director of the Provident Savings, which position he held at the time of his death.

In the discharge of his official duties, Dr. Vandewater possessed a high order of talent and ability which, joined with his pleasing personality, secured and retained for him, to a marked degree, the regard of the men in the field.

In addition to his successful life insurance career, he continued his interest in business and general medicine, serving for years on the staff of the Hackensack Hospital. He was successively vice-president and president of the Bergen County Medical Society of New Jersey, director of the First National Bank of Spring Valley, and a Free Mason of high order in Bergen County Lodge, No. 40, R. A. M.

Dr. Vandewater is survived by a widow, a son and a daughter. Dr. Vandewater was a man whose loss will be keenly felt.

WILLIAM L. MARTIN, M.D.

BY NEWLIN STOKES, M.D.

William M. Martin, M. D., died at his home in Rancocas, N. J., January 22d, 1903, aged 76 years.

Born in Chester Co., Pa., he received a county school education until his fourteenth year, when he finished his classical studies at the Unionville Academy, Chester Co.

He graduated at the Jefferson Medical College in 1852. While a student under the care and advice of his preceptor, Dr. Murphy, he attended many of the poor of his neighborhood.

Immediately after graduating he settled in Rancocas, Burlington Co., N. J. Then commenced a long and useful career. He was a

true born doctor of the old school—a typical country doctor; genial, courteous, ever ready to do a favor, and withal most modest and unassuming; a regular attendant of the meetings of the medical society, of which he early became a member; an early advocate of asepsis and antisepsis, and believed in keeping up to modern standards of practice.

He was to the last an advocate of bleeding in acute pneumonia, a practice which some of us are probably too shy of.

Dr. Martin practiced his profession faithfully and conscientiously, securing and maintaining to a marked degree the love and esteem of his patients. The emoluments of his business were to him secondary. He made but little profession of his religious belief, but those of us who know him best can testify to his unfaltering love and confidence in his Saviour, and we doubt not he has received the joyful summons of "Well done, good and faithful servant, enter thou into the joys of thy Lord."

JAMES M. RIDGE, M.D.

BY JOSEPH H. WILLS, M.D.

Dr. James M. Ridge, of Camden, N. J., died on the 30th of January, 1903, of Bright's disease of the kidneys. He had been previously a sufferer for a long time from diabetes. He was laid to rest in the Old Reed's Burying Ground, Tinicum Township, Bucks Co., Pa.

He was born in Bucks Co., Pa., in 1826. His father was an intelligent, prosperous farmer of Tinicum township. James received his rudimentary education from him and was sent to the public schools. In 1847 he entered the boarding school at Bridgeton, Pa. He afterwards graduated from the medical department of the University of Pennsylvania in 1852, and began the practice of medicine.

In 1856 he located in Camden, devoting himself to the practice of his profession and to scientific study and literature. He was a man of remarkable memory, staunch integrity, and never tired of work. He became a member of the Camden District Medical Society in 1866. There was no subject of medical importance in which Dr. Ridge did not take a very active interest, and he was very aggressive in debate, demanding attention by the vehemence of his speech as well as by the force of argument.

He was called to fill positions of honor, such as President of the Board of Education, President of Camden City Medical Society, President of Camden District Medical Society, Representative to International Medical Congress held in Philadelphia, etc.

As we saw him engaged in debate, many of us looked up to his tall, well-formed figure surmounted with white locks as a patriarch in medicine, for he practiced medicine over half a century.

HON. WALTER S. LEAMING, M.D., D.D.S.

BY JAMES MECRAY, M.D., AND EUGENE WAY, M.D.

It is no common chance that takes away a noble mind; and it was a serious and severe blow to our whole county when, on March 29th, 1903, it was unexpectedly announced in Cape May that Dr. Walter S. Leaming, the Postmaster of Cape May, was stricken by the hand of death.

As the *County Gazette* well says, "Dr. Leaming was in the very prime of life, and with mental power far in excess of the average, with a memory certainly second to none, with a warm heart that beat for other's woes, with a genial and agreeable address that always attracted strangers as well as friends, he was easily one of the most popular men in South Jersey."

His father, Dr. Jonathan F. Leaming, selected as State Senator for the county of Cape May, was well nigh crushed beneath the weight of the loss of his first born, but still lives, at the ripe old age of eighty-one, at the Court House, in this county. Dr. Leaming passed through the public schools of the county, attending Mayville Academy, and studying for a time in New York City. He finally entered the employ of Edmund T. Davis, in the latter city, and was for a time assistant court stenographer. He graduated at the Pennsylvania Dental College in Philadelphia in the class of 1876, and in 1882 Dr. Leaming completed a course at the Jefferson Medical College, graduating as a doctor, with distinction. His first wife was Miss Mary H. Holmes, daughter of Hon. Richard C. Holmes, and in 1889, when he came to live at Cape May, he married as his second wife Rebecca Bennett, daughter of William Jackson Bennett, leaving three children by his

two marriages. Besides being an able man in his chosen profession, he was a wise man as a politician and a statesman—perhaps the wisest of his generation in this county.

As a political leader, he was quiet, but forceful, loved by his friends, but always retaining the good will of his political opponents. He was a modest man, and wisdom often credited to others in his party's counsels frequently had its origin in the brain of Dr. Leaming. Above all, he was a Christian man, as well as an honest man, and the pastor of the Baptist church of which he was an honored member. Rev. Mr. Williams, told the writer of this "that when the last summons came Dr. Leaming met it with a true courage and faith of a Christian man."

Dr. Leaming could have been re-elected readily the second time to the State Senate, as his father was, but he had wearied of the strife, the anxieties and the exigencies of political life. It was General William J. Sewell, then United States Senator for New Jersey, who said of Senator Walter S. Leaming:

"I have the warmest and deepest sentiments of friendship and affection for Senator Walter S. Leaming. His career of six years at Trenton as a public servant, three in the Senate and three in the House of Assembly, were eminently able and honorable throughout. His public character was marked by good faith and good sense; he was a true man."

Dr. Leaming's funeral was the largest outpouring of sorrowing friends since the funeral of Richard S. Leaming at Dennisville some years ago.

And the political and personal friends recall with great pleasure the just tribute to Dr. Leaming's character in Lewis's History of the First Congressional District of New Jersey. He says: "The common opinion has for some time been that American politics were probably never so corrupt as at the present day; that the affairs of the country are in the hands of the professional politicians, who are working for their own interests, and not for the good of the majority; and it is such men as Dr. Leaming that restore the public confidence and renew the faith that we shall have wise legislation and just laws brought about by honorable men with pure political records and devoted to their country's interests, and not to their own aggrandizement."

ISAAC M. DOWNS, M.D.

Dr. Downs was born at Berlin, Camden Co., N. J., December 5th, 1841. He was the son of James and Harriet S. Downs. While he was yet in his infancy his father moved to Tuckerton, N. J., where his boyhood days were spent. He attended the public school, and was noted for his devotion to study, rarely indulging in amusements with other children of his age, seeming to consider it almost a crime to waste time at play. This industrious pursuit of knowledge followed him through his whole life. He was a teacher in the public school for a time before entering college.

He began the study of medicine at the age of fifteen years, under the guidance and instruction of Dr. Mason, of Tuckerton. After graduating in medicine he secured a position as surgeon in the Emory General Hospital, at Washington, D. C.

Soon after the close of the war he settled at Cape May Court House, N. J., where the remainder of his valuable life was spent in devotion to the needs of those who desired his professional services, sacrificing his health and comfort in order that he might lessen the suffering of others.

He died from general paralysis, March 1, 1903, his health having been gradually failing for about three years.

Dr. Downs was a man of scholarly habits, fine attainments, and of strong convictions. He was an active member in the Methodist Church and for many years teacher of the Young Men's Bible Class.

In politics he was always an active Republican. In the years 1884 and 1890 he was elected to the office of coroner without solicitation on his part, serving the two terms of three years each with credit to himself and his constituents.

He was an active and esteemed member of the Cape May County Medical Society, always taking a deep interest in the work and progress of the medical profession.

JOSEPH SHEPPARD, M.D.

BY H. W. ELMER.

Dr. Sheppard, the son of the late Henry and Sarah Sheppard, was born in Bridgeton, N. J., June 28th, 1823, and died October 23d, 1902. He received his preliminary education at the local schools, and subse-

quently at Newark, Del. He began the reading of medicine under the late Dr. William Elmer, and after attending a three years' course at the University of Pennsylvania, graduated at that institution April, 1849. After practicing, for a short time only, at May's Landing, he returned to Bridgeton, but was soon appointed to the position of assistant physician to the department for the insane at the Philadelphia Hospital, then called "Blockley Almshouse." This position he retained for one year, and was appointed a resident physician to the hospital proper. In 1863 he was appointed acting assistant surgeon of U. S. volunteers, and was assigned to the general hospital at Chestnut Hill, remaining in active duty till close of the war, when he resumed active practice in his native town. For ten years he was physician to the county almshouse and jail, performing his duties with great satisfaction, as evidenced by his renewed appointments. He was a member of the medical examining pension board for the lower counties of the State until a short time before his death, when failing health compelled him to resign. For twenty-eight years he served without interruption as Treasurer of the Cumberland County Medical Society.

For many years he has been a consistent member of the Second Presbyterian Church of Bridgeton, faithful to his work and exceedingly conscientious in the full discharge of what he deemed to be his duty. By nature possessed of a retiring disposition, his failing health within the past few years has tended to withdraw him from participation in public affairs, but Dr. Sheppard will always be regarded as a man of strict integrity and honor.

ARTHUR WARD, M.D.

Arthur Ward was born at Belleville, N. J., Dec. 23d, 1823, and died at Newark, N. J., July 6th, 1902. He was the son of Samuel L. Ward, M.D., for many years a practicing physician in Belleville. His mother was Caroline Bruen Ward. Arthur Ward was educated at Bacon Academy, Colchester, Conn. After leaving the academy he entered Yale College, from which he received the degree of Bachelor of Arts in the class of 1844. Subsequently Yale conferred the Master's degree upon him. After graduation he took up the study of medicine under his father, and with the late Thomas Cock, M.D., of New York, who

was one of the founders of The College of Physicians and Surgeons. He pursued his studies in the college, which, in 1847, conferred upon him the degree of Doctor in Medicine. Soon after he began practice in Newark. After a year here he removed to Belleville, where he remained until 1865. Meanwhile his Newark practice became so large that he again removed to Newark. At the time of the establishment of the Hospital of St. Barnabas, he was made one of the attending staff. His connection with the hospital terminated only with his death. For several years he had been president of the medical board. The Essex District Medical Society also honored him. It 1868 he was president of this society. When the Medical Society of New Jersey created the office of permenent delegate, Dr. Ward was one of the six selected to represent this Society. He was a permanent delegate at the time of his death. He was also a member of the Medical and Surgical Society of Newark, and had been at one time its president. He was also a corresponding member of the Medical Society of Connecticut, and a life member of the New Jersey Historical Society. He was for many years an elder of the North Reformed Dutch Church of this city.

In 1854 he married Anna C. Lee, daughter of Robert Lee, of Rahway. The death of Mrs. Ward was preceded by a long and harassing illness. Dr. Ward's care of her was marked by a tireless devotion; hopeful when to others everything seemed hopeless. Her death broke him down, and three months later he followed her.

FREDERICK WILLIAM THUM, M.D.

Frederick William Thum was born in Servia April 24th, 1865, and received his elementary education in public schools at Frankfort-am-Main and Laubach, Germany. At the age of fifteen he came with his parents to this country. The family came directly to Newark, and here they established their home. In order to fit himself for the practice of pharmacy, young Thum entered the New York College of Pharmacy, and was graduated from that institution in 1885. In connection with his brother George, he founded a pharmaceutical establishment in Elizabeth, New Jersey, in which project at the time of his death he was still interested. When the success of this enterprise was fairly assured, Thum matriculated at the College of Physicians and Surgeons, New York City, and in 1891 received the degree of doctor in medicine from Columbia University. He immediately began

practicing in Newark, and attained a noteworthy position among the physicians of this city. He was a good student, painstaking and progressive. He was soon connected with the German Hospital, and was for several years president of the medical board. At the time of his death he was also one of the visiting physicians at St. Michael's Hospital. He was a member of many social organizations and of the Essex District Medical Society and the Practitioners' Club. He was also interested in politics, and in 1900 was nominated for the position of Commissioner of Public Works in Newark, but was unsuccessful at the polls. In November, 1896, he married Miss Paula Lorenz. A month before his death, he received a poison wound, while performing an operation. Septicæmia finally developed in a very virulent form, and on June 27th, 1902, he died. He was thirty-eight years old.

HENRY MELVILLE SMITH, M.D.

Henry Melville Smith was born at Meredith, N. Y., February 3, 1847, and received his early education in and near Delhi, N. Y., after which he took up the study of medicine. In 1871 he was graduated a doctor in medicine at the College of Physicians and Surgeons, New York City. After several years of active work in his native State, he removed to Jersey City, N. J., where he built up a lucrative practice. In January, 1886 he was elected a member of the medical staff of Christ Hospital, Jersey City. Five years later he was transferred to the surgical staff. For several years he was president of the medical board. In 1898, as a consequence of overwork, he was compelled to sever his connection with the hospital and to give up for a time all professional work. He removed to South Orange as a means of recuperation. After two years of rest he was enabled again to take up his work in South Orange. He continued in practice until a few days before his death, which occurred November 28th, 1902, and was due to myocarditis. His body was interred at Delhi, N. Y.

*ROBERT MORRIS SUTPHEN, M.D.

Robert Morris Sutphen was born near Plainsboro, N. J., April 2d, 1819, and died at Newark, N. J., September 2, 1902. While he was quite young the family moved overland to Ontario, N. Y., when the

* Carried on the rolls of the Society as Reuben M. Sutphen, M.D.

country was almost a wilderness. He attended the local school, and was afterward a student at Marion Seminary nearby. Returning to New Jersey in 1845, he entered the office of Dr. John Voght, Freehold, as a medical student. After the necessary courses of lectures he was graduated in medicine, in 1847, from the medical department of the University of New York. He began the practice of his profession in the village of Walworth, Wayne Co., N. Y. He was successful, and remained in this community for twenty years. In 1848 he married Virginia Morris at his old home, Plainsboro, N. J. In 1867 he removed to Newark, N. J., and became associated in practice with Dr. George R. Kent. Until his last illness he continued at work; fifty-four years of it—an unusual number. He was a very religious man, but his was a religion of cheerfulness, that helped him to bring comfort and hope into the sick-room.

WILLIAM McDANOLDS STRUBLE, M.D.

BY C. F. ADAMS, M.D., AND B. W. McGALLIARD, M.D.

The subject of this sketch was born in Branchville, Sussex Co., N. J., in 1860. He received his early education in the public schools of his native place and in the school of Dover, N. J.

On the removing of the family to Trenton, N. J., he assisted his father in a grocery store. At this time, when about twenty-one years old, he took up the study of medicine under the preceptorship of Dr. Lyman Leavitt, later attending the medical department of the University of Pennsylvania, from which he received the degree of M.D. in 1885.

His student days were marked at all times by close attention to his studies. It was his custom to recite page after page from his text-books to his preceptor, and by reason of his close attention to his work at the medical school he graduated as the first of his class.

Soon after his graduation he was appointed City Physician, and during his service as assistant coroner's physician he extended his knowledge of anatomy and pathological conditions.

In June, 1886, he was married to Rachel Holt. In 1897 he was appointed a member of the surgical staff of Mercer Hospital, which position he held to the time of his death.

Through his efforts, largely, in the City Board of Health, an ordinance was established that required that the Health Officer be a physician, and efforts in the direction of improved care and attention of contagious disease cases resulted in the building of improved municipal buildings for the care of cases of contagious diseases. It was at this time, also, that the Board of Health began the consideration for the registration and control of tuberculosis cases, which resulted in an ordinance which regulated the control of these cases. He was President of the Board of Health at the time of his death, which occurred August 28th, 1902.

He was one of four physicians who, in the face of considerable opposition, succeeded in securing the passage of a law, in the year 1895, in the State Legislature, allowing the use of human dead bodies for the furtherance of anatomical and pathological studies, and in harmony with that law, helped to establish the Trenton Pathological Association.

He was a persistent worker in his profession, administering to a large practice. He was devoted to the science and practice of medicine, working day and night, never resting—thus was "the silver cord loosed and the golden bowl broken, and the spirit returned to God who gave it.

CARLOS ALLEN, M.D.

BY H. D. VAN GAASBECK, M.D.

Dr. Carlos Allen died at his home in Vernon, N. J., on Thursday, February 19, 1903. He was the eldest member of the Sussex County Medical Society, having joined it April, 1848. He was born at Huntington, Vt., September 18, 1814, being in his 89th year at the time of his death. He was educated at the academies of Richmond and Williston, Vt. He graduated from the medical department of Dartmouth College in November, 1837. He practiced his profession for the next five years at Richmond, Vt. He then removed to what was formerly known as Deckertown, where he practiced until 1846, when he removed to Vernon, where he practiced until old age and increasing infirmities prevented.

He was a man of culture and refinement, and kept well in touch with the advances made in his profession. He was genial and affable

and well beloved by all who came in contact with him. In 1860 he published a map of Sussex County, which has been the accepted authority as a map up to the present time. In 1880 he was elected president of the Sussex County Medical Society. He was twice married, his first wife being Miss Arvilla Browning, of Richmond, Vt. She died in 1867. His second wife was Miss Susan Simonson, daughter of Major William Simonson, of Vernon, N. J. He is survived by two children, Arvilla, who resided at home, and who tenderly nursed and cared for him in his declining years, and a son, Irvin, who resides in Glenette, Florida. Dr. Allen had been in feeble health for a number of years before his death, and consequently did not practice his profession, but during his prime was a successful and able practitioner.

SIDNEY B. STRAHLEY, M.D.

BY SHEPARD VOORHEES, M.D.

Dr. Sidney B. Strahley, of Newton, N. J., died April 15, 1903, of tuberculosis of the bladder after five and a half years of painful illness. He was born at Huntsville, Sussex County, N. J., September 28, 1861. He received his early education in the schools of the county, and afterward taught school for three years and spent his vacations and leisure hours reading medicine under the direction of the late Dr. John Miller, of Andover, N. J. He attended lectures at the College of Physicians and Surgeons, Baltimore, Md., and graduated with the class of 1887. He located in Andover, being associated in practice at first with his former preceptor, Dr. Miller. By close application to his work, allowing nothing to come between him and his patients, and by his kindly ways, he soon succeeded in building up a large practice, and he was highly esteemed by the community.

In the autumn of 1897 he was forced, because of failing health, to give up his medical labors. He went with his family to southern California, but the following spring, finding he had not received benefit by the change, he returned to his native town and rested during the summer, and the next winter tried the Indian River region of Florida. Here he improved so much that in the spring of 1899 he came to Newton, the county seat of his native county, and opened an office, to return South the next winter. He came back to Newton in

the spring of 1900 much benefited in health, and entered actively in practice; but after a few months of such labor he was again forced to give up work, and he went back for the third time to Florida in the autumn of 1901, to return in the spring unimproved and to remain confined to his bed until death came as a relief after a year of intense suffering. Dr Strahley was a faithful, conscientious physician, possessed of a cheerful disposition, had a fondness for humorous anecdotes, and could tell them well. He was a man greatly attached to his home, and always had his wife and little daughter accompany him in his travels.

He was a graduate of the Chautauqua Literary and Scientific Circle, a work in which he took great interest. In 1894 he took a course in the New York Post Graduate Medical School. Besides being a member of the County and State medical societies, he was a member of the Tri-County Medical Society, and for several years of the American Medical Association. He was a life member of the New Jersey Historical Society. He was a consistent member of the Methodist Episcopal Church, and from his early youth took an active part in religious work.

He married in 1889, Susie V., daughter of Marshall S. Hibler, of Huntsville, N. J. The widow and their only child, Elva E., a girl of nine years, survive him.

REPORTS OF DISTRICT SOCIETIES.

ATLANTIC COUNTY.

To the Chairman of the Standing Committee, etc.:

The District Society has held its regular meetings throughout the year. These meetings were characterized by the usual average attendance and slightly more enthusiasm evidenced than heretofore. Seven new members were added to the roll during the past year. The society lost two of its members during the year—one through removal, and death claiming one of our oldest and most ardent workers, Dr. Theophilus H. Boysen (See obituary notice). The county and city are at present unusually free from contagious diseases. During January and February there were a number of cases of influenza, but no epidemics reported. During the height of the season (August), 1902, a number of cases of typhoid were reported, which led to an investigation by a committee of local physicians, the following being a full report:

REPORT ON TYPHOID FEVER AT ATLANTIC CITY.

To the Atlantic City Academy of Medicine:

GENTLEMEN—At your last regular meeting, on September 19, 1902, attention was called to the prevalence of an increased number of cases of typhoid fever in this city, and to the adverse reports from cases in other cities, said to have originated here; also to several publications that indirectly reflected on sanitary conditions here. You appointed a committee to take up this matter systematically and investigate every possible point from which typhoid or other diseased conditions might emanate, and authorized the employment of such sanitary experts as might be of assistance. We beg to make the following report:

WATER SUPPLY.

We personally investigated the distribution, pumpage, reservoir and accessories, and found no possible present source of contamination of the supply. The water-supply is drawn largely from a series of driven artesian, self-flowing wells in an almost uninhabited watershed. These wells tap a subterranean stream of the purest fresh, clear water that can be found, and there can be no possible contamination from

this source. This water is delivered into a reservoir of pure sand and gravel, and pumped direct from this point to the city. The second source of supply is a small lake or pond fed largely by springs and small streams coming from the wild, natural cedar lowlands, and two miles from the pumping station, to which it is conducted through an open artificial canal. Our Water Commissioners are planning a closed wooden conduit to replace this open canal. This water, like all cedar water, has a slight brownish color, due to coloring matter from cedar roots in the lake, but this is not injurious.

We are convinced that no typhoid fever has emanated from this source. There is also a reserve artesian system of deep wells on the island in the city from which is taken as pure a supply of water as can be found in the world.

SEWERAGE SYSTEM.

The sewers are built on the West system; all sewage flows to a common pumping station, and is pumped in large pipes across the salt marshes, small streams, Penrose Canal and Clam Thoroughfare, into Beach Thoroughfare, at a point about two miles from the center of the city. Beach Thoroughfare is a Government highway of ocean water and carries large ocean-going sailing vessels. The sewage pumped into it is infinitesimal in comparison to this body of water, and, by the time it flows through its channel to the sea, it is almost *nil. We are informed that, during the past summer, owing to a break in this disposal pipe, almost the entire sewage of the city passed directly into Penrose's Canal, and flowed through this with the ebb and flow of the tide into the Thoroughfare.* Penrose's Canal is an artificial waterway carrying a comparatively small proportion of tide water. It begins near the railway entrance to Atlantic City and extends about a mile or less to Clam Thoroughfare, and this in turn to another point on Beach Thoroughfare near the regular sewage outlet.

We know of two authentic cases of typhoid fever that could be traced positively to sources outside of Atlantic City, from which all excreta was thrown into the sewer for four weeks in one case and ten days in the other, with no disinfection whatever. Other cases may have done the same. Sewage contaminated with typhoid stools, passed directly into Penrose's Canal and contaminated this water, rendering it dangerous for use for any purpose. We also find another point, known as Gardner's Basin, in the city limits, where all the

sewage of that immediate district passed direct for many years until sewers were laid, and at present these waters are contaminated with the excreta thrown from boats, as well as from two properties not yet connected with the sewer, rendering this water unsafe for use. We find in these infected waters the strongest and most positive circumstantial evidence pointing to the source of the present trouble.

OYSTER SUPPLY.

The so-called "Absecon Salts" are grown in beds situated near Grassy Bay, where the tide-water of our inlet and Brigantine Inlet divide, and far from sewage contamination. A salt-water oyster is rather bitter and "thin" when first taken, and must be "fattened," "freshened" or "fed" before it is "prime." This "fattening" process consists in putting the oyster in a mixture of fresh and salt water in certain proportions. They remain there for 24 to 48 hours, and are then ready for delivery, greatly increased in size from their "drink." During ten months of the year the "fattening" process is done near Absecon, where the waters are pure and safe, but in July, August and part of September the largest dealers have been "fattening" their oysters in waters taken from Gardner's Basin and at the city end of Penrose's Canal, the points already specified as infected with sewage. The largest individual dealer had his "crib" in the mouth of Penrose's Canal, and this dealer, as well as others, unknowingly and thoughtlessly, supplied the markets with sewage-fed oysters. These oysters, when eaten raw, exposed one to diarrhœa, cramps, dysenteries and, possibly, typhoid fever. We find on investigation that all of the typhoid patients, with few exceptions, had indulged freely in these raw oysters and undoubtedly contracted their disease from them.

Clams taken from these sewage-infected waters are usually cooked; but, when eaten raw, expose to similar troubles.

Other food and milk supplies have been considered, but, as the cases are not localized to the delivery of any dealer, are found not at fault. Several of these typhoid cases have been traced to sources outside of our city, while others, who have not eaten oysters raw, may have been exposed by some direct or indirect contamination away from this city. With typhoid fever epidemic in our leading cities, we may fully expect to hear of many cases wrongfully attributed to this city, on the strength of a few days' stay here. In several instances, with cottage and transient guests, it was their daily custom

to spend the day at business in our nearby cities, eat their dinners there and return in the evening, and then attribute their typhoid to Atlantic City. The possibilities in these cases, in which the raw oysters have not been eaten, are strongly in favor of out-of-town infection.

Believing as we do that we have located this entire trouble, these facts were presented to the Board of Health of Atlantic City, *by the committee in person, and it was ordered by the Board of Health that in the future no oysters fattened in the waters between Beach Thoroughfare and the ocean, and no clams taken from Beach Thoroughfare, or the waters between it and the ocean, should be sold or delivered within the corporate limits of Atlantic City under the penalty of a heavy fine.* The Board of Health also resolved to notify the local boards of health in the oyster "fattening" districts with a view to properly regulating and safeguarding the output. All dealers have been notified of this ruling, and it is now in full force. We consider our oyster supply now safe.

(Signed) B. C. PENNINGTON, *Pres.*
W. BLAIR STEWART, *Sec.*
W. M. POLLARD.
PHILIP MARVEL.
J. FRANCIS DE SILVER.
Committee.

UNIVERSITY OF PENNSYLVANIA,
Laboratory of Hygiene,
PHILADELPHIA, Oct. 20, 1902.

Dr. W. BLAIR STEWART,
N. E. cor. Pacific and North Carolina Aves.,
Atlantic City, N. J.

My Dear Dr. Stewart:

I have read your report carefully, and after examination of all available evidence on the subject and personal inspection of your water-supply, sewage-disposal system and the oyster-fattening plants under suspicion, am convinced that the opinion expressed by your committee is correct. I am glad, therefore, to be able fully to endorse all that you have said in your report, and particularly that part of your report referring to the oysters as the probable source of

the infection during the summer. I do not believe that the evidence we have gotten together on the matter justifies any other conclusion.

Very truly yours,

(Signed) A. C. ABBOTT, M.D.,
Professor of Hygiene and Bacteriology,
University of Pennsylvania.

I coincide with the conclusions above set forth.

(Signed) HENRY LEFFMANN.

Our Committee on Illegal Practitioners was instructed to bring immediate action against "Dr." H. Walter, who is supposed to be practicing medicine in Atlantic City without complying with the legal requirements. He claims to be practicing a system of Mechano-Neural Therapy, and is conducting a school or college, which is said to be authorized by a charter received from the State of New Jersey. The committee employed counsel, had Dr. Walter arrested and brought into the Recorder's Court. He waived a hearing and will come before the September term of court. The committee will take action against others practicing in Atlantic County and Atlantic City without legal registration.

A. BURTON SHIMER, *Reporter.*

BERGEN COUNTY.

To the Chairman of the Standing Committee:

The District Medical Society of the County of Bergen has held its regular quarterly meetings throughout the year, and I am pleased to report that there has been a larger attendance, and greater interest has been displayed among the members than in any previous year. The annual meeting, which was held at Hackensack April 14th, was made particularly interesting by Dr. Gill Wylie, of New York, who addressed the society on "Imperfect Development of Children, Especially Girls, between the Ages of Twelve and Fourteen Years." A copy of this address I have already forwarded to your committee, and it will no doubt receive a place in the Transactions of the State Society. Among other essays read during the year, and in fact the only other essay which has come to my hands, was one by Dr. Frederick S. Hallett, of Hackensack, on "Adenoids and Hypertrophied Tonsils," which has also been forwarded to you to appear as a separate essay.

During the year five new names have been added to our membership list. We have but one death to record, that of Dr. A. L. Vandewater, of Hackensack, whose obituary will appear in its proper place.

Most of the members report la grippe and pneumonia prevailing throughout the county during the winter and spring months. A number of cases of diphtheria appeared in Hackensack and Englewood during the early spring. Parotitis has prevailed epidemically throughout the county, but we have been remarkably free from any serious epidemics. Dr. Parsell, Closter, and Dr. Currie, Englewood, report epidemics of pertussis in both places. Dr. Parsell reports three cases of typhoid fever occurring in his practice, and Dr. Currie typhoid and malarial fevers throughout the year. Dr. Parsell also reports a case of tetanus, caused by stepping on a rusty nail. The patient died on the fourth day, although large injections of tetanus antitoxin were used.

The advancement made in our society during the past year is evidenced by the increased interest of the members as well as by the increase in our membership roll, and it is gratifying to report that this has been the most successful year that the society has yet known, and I sincerely hope that the advancement and interest the members are showing will continue to grow until our society shall be second to none in the State.

J. W. PROCTOR, M.D., *Reporter.*

ENGLEWOOD, N. J., June 9th, 1903.

ADENOIDS AND HYPERTROPHIED TONSILS.

BY FREDERICK S. HALLETT, M.D., HACKENSACK, N. J.

So much has been said and written upon the subjects of hypertrophied tonsils and adenoids by the nose and throat men that there is surely nothing new for the general practitioner to say. My excuse for preparing this brief and very incomplete paper is because I believe that, in spite of all that has been said, we are inclined to neglect these cases, especially in very young children.

The two conditions are so frequently associated in children that it seems to me quite proper to consider them conjointly. The diagnosis is usually not difficut, especially when the hypertrophies are extensive.

The mother will give us a history of the child sleeping with open mouth and snoring; it is very restless at night; has one cold after another, with profuse discharge from the nose; the child has

difficulty in nursing; it will frequently drop the nipple to get air. Earache is a prominent symptom, followed by discharge of pus from the ear. The child is apt to be delicate and below par in development, and mentally deficient as well. It has a stupid facial expression with heavy eyes. The nose is broad with mouth half open, and the voice is muffled and nasal in character. The upper lip is very often excoriated by irritation of the more or less constant discharge from the nose. Nose-bleed is a frequent symptom.

Such a history as the above makes the diagnosis almost positive. These children have capricious appetites, indigestion with vomiting is the rule. They are subject to various nervous reflexes, as nocturnal enuresis, headache, cough, stammering and stuttering.

Upon examining the throat the hypertrophied tonsils are easily recognized. In cases where the pillars of the fauces are adherent to the tonsils the hypertrophy may seem less marked than it really is. It is not so easy to recognize the adenoids. It requires an experienced hand to examine the naso-pharynx with a mirror in a very young child. I have never been able to do it.

When the throat is exposed there is very often seen an egg-like mass of mucus hanging down from the naso-pharynx, and when present, it is said to be quite diagnostic. The diagnosis is confirmed by digital examination. For this the child is held on the mother's knee, or, if old enough, he may be allowed to stand. The examiner stands behind the patient encircling the head and neck with his left hand, pressing the child's head against his left side. The mother can hold the child's hands. The mouth is now opened, and can be kept open by putting the handle of a tongue depressor between the teeth, or by pressing the cheek between the teeth with the left hand. The index finger of the right hand is now quickly carried behind the soft palate and up into the naso-pharyngeal cavity, and here a soft mass will be felt, said to resemble that of a bunch of worms. When the finger is withdrawn a little blood usually comes with it, which does not happen when the naso-pharynx is normal.

Adenoids might be mistaken for tumors but these growths are not often found in young children. In those cases where the adenoids and tonsils are large, with pronounced symptons, all authorities agree that they should be removed at once. If the hypertrophies are small and the nasal obstruction not marked, it may be good treatment to leave them alone, as there is a tendency for them to disappear at the age of puberty.

The treatment of these cases is absolute removal by cutting instruments. The removal of the adenoids by the finger is not thorough as a rule. If the operation is complete, there is little likelihood of the hypertrophies returning.

We should not delay in advising operation in these cases. The child's hearing, development and general health may become hopelessly impaired. These children are especially subject to the diseases of childhood from the already lowered vitality. The diseased tonsil is most favorable soil for diphtheria, scarlet fever and other infectious diseases.

The contra-indications to operative treatment are hæmophillia and inability to bear a general anæsthetic. If acute otitis media exists, there may be another attack following the operation, but this is likely to occur anyway, even if the adenoids are allowed to remain.

In these young children the combined operation is done under general anæthesia. The choice of anæsthetic is left to the operator; ether is undoubtedly the least dangerous.

The child is placed in the recumbent position and when well under, a mouth gag is placed into position. The patient is now pulled forward, so that the head hangs over the table supported by the assistant; the operator stands facing his patient on the left side of the table. A suitable size tonsillotome is selected, one that will fit nicely over the tonsil; the tongue is held down by a tongue depressor, or better the finger, so that the throat can be brought into full view. If there are any adhesions between the pillars and tonsils, they are quickly broken up and the tonsils removed. It is best to take the smaller first, in cases where both are to be removed, because after the mouth fills up with blood it is not so easy to get at the smaller one.

After the tonsils are removed, the head is turned to one side and the blood allowed to run out of the mouth. The index finger of the right hand is now introduced into the naso-pharynx and the location and extent of the adenoids noted. The Loewenberg forceps is inserted (closed) behind the soft palate and up into the naso-pharynx. One must observe in which direction the handles of the forceps lie. They must be kept in the median line. If rotated to the left there is danger of grasping the eustachian eminences, or if the handles are lifted too near the upper jaw, the adenoid tissue may be missed in the grasp of the forceps. If the handles are brought down too near the lower jaw there is danger of grasping the posterior portion of the septum.

When the forceps are in position they are widely opened and closed. A slight rocking motion from side to side will serve to tear the tissue away.

The forceps may be introduced a second time if there is much adenoid tissue remaining.

The operation is completed with the curette. This is passed into the naso-pharynx with the handle depressed, so that the cutting blade reaches the roof of the naso-pharynx. Firm pressure is now made upon the handle and the cutting surface sweeps over the upper and posterior wall of the cavity. This sweep is made in the median line. A second sweep is made with the curette carried up as before. In the downward sweep, lateral pressure is made, the curette passing behind the eustachian eminences. A like sweep is made on the opposite side.

With a little experience, one application with the forceps and the three sweeps with the curette will remove all the hypertrophied tissue. The whole operation should not take more than two to five minutes.

The child is now drawn back on the table and the bleeding usually ceases. If it should continue the naso-pharynx can be packed with cotton, saturated with strong sol. tannic acid. Applications of the same solution can be made to the tonsillar surfaces. Suprarenal capsules may be used either in solution or the dry extract.

The general treatment of hemorrhage is the same as in other cases. The after-treatment consists in keeping the patient in bed until all danger of hemorrhage has passed, During the winter months it is well to keep the child indoors for a few days until the naso-pharyngeal congestion subsides, to prevent middle ear trouble. The diet should be fluid until deglutition becomes easy; washing out the nose should be avoided unless septic symptoms arise. There is more danger from middle ear trouble from antiseptic douching following this operation than if the parts are left alone. Tonics may be given after the first few days.

If the child continues to breathe through the mouth, as is often the case, he should be instructed to keep the mouth closed, and at night a handkerchief may be tied under the chin.

The method of treatment which I have roughly outlined is the one followed by Dr. C. G. Coakley, of New York City. I had the pleasure of assisting him in his clinic for a time, and saw the excellent results obtained.

BURLINGTON COUNTY.

To the Chairman of the Standing Committee, etc.:

Inasmuch as only four of our members have made any report of medical affairs in their vicinity during the past year, your Reporter is forced to conclude that the following note from Dr. Marcy, of Riverton, represents conditions prevalent through the county. "The past year has been remarkable only for mediocrity in my practice—nothing unusual, no particular types of disease prevalent." He notes an unusual number of cases of parotitis in adults. Dr. Shipps, of Bordentown, reports thirty-four cases of typhoid fever in April and May, 1902, and nineteen during the summer months; also five cases of smallpox in April and May, 1903. None previously vaccinated. In the typhoid cases the mortality was low, not exceeding 5 per cent. Of fifty-three cases, nine had as a complication venous thrombosis, involving the left thigh only in seven and both extremities in two. In one case, a young male, sixteen years of age, insane delusions were noted at the end of the third week, continuing for three or four weeks after convalescence was established. Eventually the mental condition became normal. Dr. J. B. Cassady, of Burlington, reports about fifty cases of scarlatina in and about that city during the present spring, but says no other diseases have been epidemic.

At Moorestown the usual diseases prevalent at each season have developed with their accustomed regularity, but no epidemic of any sort has occurred. Your reporter is of the opinion that follicular tonsillitis occurs much more frequently than it did ten years ago.

The interest in our county society has been well sustained, the meetings well attended, and our membership is increasing. Among the papers read during the year may be noted one by Dr. Shipps on the "Etiology of Typhoid Fever," which was one of a symposium on that subject at the April meeting of the society.

An interesting record of a case of umbilical cord hernia was presented by Dr. Cassady. Operation was refused, and the child died in twelve days of septic phlebitis.

During the year we have lost by death Dr. William L. Martin, of Rancocas, one of our oldest and most respected members. A short obituary prepared, at the request of the society, by Dr. N. Newlin Stokes, of Moorestown, is enclosed.

Respectfully submitted,

JOSEPH STOKES, *Reporter.*

CAMDEN COUNTY.

To the Chairman of the Standing Committee, etc.:

At a meeting of the Camden District Medical Society held October 14th, 1902, Dr. Emma M. Richardson read a paper entitled "Several Interesting Obstetrical Cases," for which she received the thanks of the society.

Dr. William A. Davis reported a case of triplets and received the thanks of the society.

Dr. Daniel Strock read a paper entitled "The Effect of the Scarcity of Anthracite Coal and the Use of Substitutes Therefor Upon the Public Health." The paper was of such interest that the society requested it to be printed in the Camden daily papers. The following is an abstract therefrom:

"Failing to get this variety of coal, efforts will be made to supply its place by the use of other heat-producing substances, and, in this section of the country, practically but three are available, namely, gas, bituminous coal and oil. The probable exigencies of the winter will render it imperative that one or the other of these methods of room warming shall be used to a greater or less extent.

"Where gas is used, it is essential in order to obtain the greatest heat effect, that it be burned with a proper admixture of air, thus producing a blue flame, which is the heat flame, as distinguished from the yellow flame, that gives light. Also, the blue flame practically consumes all the gas that escapes at the burner, and thus minimizes the contamination of the atmosphere.

"It may be stated as a fact, that a gas stove burning with a yellow flame is unsafe, from a sanitary point of view, because a certain per cent. of unconsumed gas escapes into the room, thus vitiating the atmosphere thereof; and no one can continue to breathe gas-contaminated air with impunity.

"Where gas is used to heat a house or room, in addition to the observance of the above rules just mentioned, it is essential that ventilation be secured by the lowering of the top sash of a window on the side opposite to the way the wind is blowing.

"Much interest attaches to the use of bituminous, or the so-called soft coal, because we instinctively turn to coal in some of its varieties to supply the place of that which we have known from our childhood. Since the gravity of the coal strike situation has become understood

by the people, much has been said pro and con upon the subject of using bituminous coal in the household, and its use cannot be criticised upon the ground that it is a menace to health. If this variety of coal can be procured at a reasonable cost, then, in my judgment, there is no reason why it should not be used in our houses in preference to either gas or oil as a heat producer; because, with proper care, it can be made to do all that anthracite coal will do; but, it must be confessed, its use demands greater vigilance and skill than does the hard coal.

"As before said, as medical advisers, we will be questioned upon this subject of house warming, and it is incumbent upon us to be prepared to give the necessary information upon a matter so vital to the community. Therefore, it will not be out of place if we briefly consider the proper method of using bituminous coal in the ordinarily constructed heaters and ranges.

"I do not pose as an expert upon the subject, but as I have been using it in my house for several weeks, I can speak from the practical as well as from the theoretical standpoint. The fire is started in the ordinary way, with light kindling wood, followed by heavier wood, which is to form the real basis for the fire. As the coal makes a dense smoke and gives off large volumes of gas when first placed upon the fire, it is necessary to have all the draft apertures at the bottom of the range or heater scarcely closed, and the direct draft from the surface of the coal to the chimney should be open. This permits the escape of smoke and gas to the chimney rather than through the apertures of the stove or heater into the room or hot air pipes, and thence throughout the building.

"As the admission of air over the surface of the coal aids the combustion of the gases, and also the smoke, it is necessary that the aperture ordinarily found in the heater door and at the top and front of the range should be opened. As soon as the draft is well established in the chimney, the aperture at the bottom of the range or heater should be opened, to admit air to the coal from below. The first effect of heat, in addition to causing gases and smoke to arise, is to fuse the soft coal into a solid mass. This is the process of coking. In this state the coal will burn for many hours, and will require no special attention; but a hot fire will not be obtained.

"To have and maintain a hot fire, it is necessary to break up the mass of coke and open the lower draft, thus permitting the air to

pass freely through the furnace or range. To maintain the fire through the night, it is well to have a hot bed of coals upon which to lay the fresh coal, and, after the cooking process has well advanced, make an aperture in one side of the mass to permit the escape of the gases from below, as otherwise they may pass through the crevices of the furnace into the hot-air flues, and thus vitiate the atmosphere of the dwelling.

"In case the fire goes out at any time, all that is necessary is to break up the coke, and with wood build another fire on top of the coke. Soon the entire mass will be burning.

"These principles of bituminous coal burning will apply to the various other coal-burning stoves found in many dwellings.

"Oil stoves for heating purposes are an abomination, and should receive the unqualified condemnation of physicians. But notwithstanding this assertion, and notwithstanding all that physicians may say on the subject, we can be assured that many of our patients, in the present emergency, will have resource to this makeshift to warm the usual living rooms of their homes, as well as the bedrooms, in some instances. There can be no combustion or burning without the evolution of gases, chiefly carbonic acid and carbonic oxide gases, and they are both fatal to animal life, if inhaled in large amounts.

"In ordinary burning of coal or wood these gases are passed off into the atmosphere through the chimneys, and therefore are innocuous, because they mix with the immeasurably larger volume of the oxygen of the atmosphere. But their deadly qualities are occasionally made manifest in dwellings, where, through carelessness or ignorance, the smoke-pipe or chimney has become stopped, thus preventing the free escape of the gases up the chimney. In such conditions of the flue the gases pour into the living rooms, and have many times caused the death of the occupants. Of more than one tragedy of this kind I have personal knowledge.

"What occurs when coal or wood is burned, occurs also when oil is burned in lamps or stoves, with the difference only, that the products of combustion, in the case of oil burning, are permitted to pass off into the atmosphere of the room, instead of into the outer air; and the result is, the occupants of such rooms are continually inhaling an atmosphere vitiated by gases that, when taken into the lungs in large amounts, may produce death in a few moments.

"It must not be understood by this assertion that the idea to be

conveyed is that an individual occupying a room heated by an oil stove is in the imminent peril of the individual whose room is receiving from a stove the gases that should escape up the chimney. The one is in immediate danger of death; the other is in danger of imparing his health, or rendering his system more susceptible to disease that may eventually cause death.

"But in this connection, it may be said, that the individuals who would retire to a small bedroom and tightly close the doors and windows, as is so frequently done on very cold nights, and lights an oil stove with the intent of permitting it to burn all night, would be in great immediate danger. This is not an imaginary situation, as very recently I was consulted by a patient who asked my advice as to the feasibility of warming the bedroom with an oil stove, she intimating that the result would be more surely successful if the doors and windows were closed.

"That this method of heating will be largely resorted to in case a scarcity of coal continues, is evident from the fact that in recent years it has become the favorite method of warming certain rooms of the house, where the toil of caring for a stove was objectionable; and on the other hand, by many who for economical reasons, felt compelled to depend upon it. Therefore, while some may listen to our cautions, many more will make a virtue of necessity and continue thus to warm their rooms.

"To this class we can only say that provision for proper ventilation be made by partly opening a window sash. The wick of the stove should not be turned very low, or so high that the flame shoots up to a great height in the stove. In both these conditions, imperfect combustion takes place, and more gas escapes into the room than will occur when the flame is of moderate size. The impression that prevails, that because the room heated by this method is saturated with moisture, therefore every precaution for safety has been observed, and the gases destroyed, is a mistake. To remain in such a room for a period is enervating. The occupants will generally be found to complain of malaise and headache, and certainly will be more susceptible to exposure to the cold outer air."

Dr. W. M. L. Coplin, of Philadelphia, delivered an instructive address, entitled "The Doctor and Medico-legal Inquiries in Murder Cases." He was given a vote of thanks by the society.

At the meeting held December 4th, 1902, Dr. Alfred Cramer read

an interesting paper on "The Etiology," Dr. Wm. I. Kelchner on "The Diagnosis, Early and Differential," and Dr. W. W. Kain on the "Treatment (More Recent Methods) of Tuberculosis," all of which were listened to with deep interest. Dr. Elwood R. Kirby, of Philadelphia, read a paper on the "Surgical Treatment of Bright's Disease," for which he received the thanks of the Society." Dr. Andrew J. Downes gave us a talk on "Electro-thermic Hemostasis in Abdominal and Pelvic Surgery," and received the thanks of the Society. Dr. Joseph L. Nicholson reported a case of double extra uterine tubal pregnancy. He also reported for Dr. Paul Mecray (who was unavoidably absent) a case of large ovarian cyst, containing seven quarts of fluid.

At a meeeing held February 3d, 1903, Dr. F. M. Wood read a paper on "The Causes that Lead to Prostitution," Dr. H. H. Sherk, one on the "Extent of Prostitution," and the Hon. E. G. C. Bleakley, on "The Law and its Relation to Prostitution." "Christianity and Its Relation to Prostitution," by Rev. J. Madison Hare (owing to the illness of the minister), had to be omitted. "The Results of Prostitution as Manifested in the Domain of Medicine" was ably presented by George M. Gould, M. D., of Philadelphia.

In answer to the query, "What diseases have been prevalent in our county?" Dr. Leavitt, speaking for Camden City, says: "I wish to report that since May 1st, 1902, to date, just one year, we have had reported at the Board of Health office 81 cases of smallpox in this city, and most of these were treated at the Municipal Hospital by myself with only two deaths (one baby and one man). Most of the cases during the warm months were mild.

Scarlet fever has been the most prevalent disease during the year, but the cases were nearly all of a mild type. 221 cases were reported, and very few deaths were reported from these.

Diphtheria has not been so prevalent during this year as last, and like scarlet fever, the cases were mostly mild and very few deaths occurred. 103 cases were reported.

We had reported 14 cases of membranous croup. Nearly all of these proved fatal.

Typhoid fever seems to have almost lost its job in Camden as only 42 cases were reported during this time. The origin of many of these can be traced to some other place.

Of tuberculosis I can not write with any degree of accuracy, as only a few cases get reported.

During last winter pneumonia was quite prevalent, and of rather a severe character.

La-grippe has also been quite prevalent during the winter; most of the cases being affected with more or less congestion or catarrhal trouble of the lungs and inflammation of the throat, pains in back, head, etc.

We have also had a large number of cases of rheumatism, which may be from the effects of la-grippe and wet weather during the winter.

Dr. H. H. Sherk, reporting for East Camden, says:

"The diseases most prevalent in my section during the past year have been inflammatory rheumatism of a most severe type, grippe with a tendency to the abdominal variety, accompanied with vertigo and nausea, whooping-cough, chicken-pox and pneumonia, the latter not having been so fatal as during former years. There has been a marked absence of diphtheria, but plenty of tonsillitis, and some scarlet fever of a mild form."

Dr. J. W. Marcy, referring to Merchantville, says:

"Measles, mumps and grip have been with us to the exclusion of almost all else during the past winter. All were mild, except that the grip was accompanied by a very severe spasmodic laryngitis."

Dr. John R. Stevenson, reporting from Haddonfield, says:

"The past year has been a comparatively healthy one in this section of the county. The summer was moderately free of the bowel diseases of both adults and children. Malarial fevers, although they occur sporadically in some localities, are yearly becoming more infrequent. There was no smallpox in Haddonfield, or in close vicinity during the year. The nearest point in which it prevailed was a colored settlement, Snow Hill, about 2½ miles from here. A few isolated cases of diphtheria and typhoid fever have been reported to the Board of Health. The cause of the later disease is usually credited to the bad water of Philadelphia where so many of our citizens spend the day, but one case under my care was surely caused by a waste water-closet well overflowing into the cellar.

"The peculiarity of the slight epidemics of smallpox in this part of the county is the difficulty of diagnoses and the general mildness of the attacks. Differences of opinion have been held by painstaking doctors. Although I have had much experience in the disease, especially in the severe epidemic of 1872, I have never before seen

anything like it. In the last case, in an adult that came under my notice, no one could say from the eruption of five vesicles, whether it was varioloid or varicella. It was the prodromes that decided its character, viz: the non-impression of vaccination for ten years; recent exposure to the contagion, slight suffusion of the eyes, and the preceding back and headache. This case was typical of many others."

Dr. D. W. Blake, speaking for Gloucester, says:

"The sanitary condition as well as the general health of the inhabitants of this city during the past year has been fairly good. But comparatively few cases of la-grippe appeared during January and February, and these were mild in type. Sporadic cases of scarlet fever and measles have appeared only to be stamped out by strict quarantine regulations. During the past winter we have had a number of cases of typhoid fever, mostly of a mild type, occurring among the employes of the New York Ship Building Co. So far, we have been unable to trace the source of the contagion.

"All the streets are paved, and a most excellent sewer system is provided for the entire city. Mosquitoes are the pest of our lives, and yet malaria is almost unknown."

Dr. A. L. Le Fevre, reporting for Blackwood Town, says:

"Contagious diseases have been few in my practice this winter. I have had a few sporadic cases of scarlet fever and only one typhoid. La-grippe has been prevalent, complicated with pneumonia, and especially pleurisy. There has been a slight increase in obstetrical cases compared with last year's report."

Two deaths occurred among our members during the year; that of Alexander M. Mecray, which was reported in the Transactions for 1902, and that of James M. Ridge which happened on the 30th of January, 1903.

At the last annual meeting, held in May, 1902, the active membership of our society consisting of 63 active members. During the year there have been 23 applications for membership. Fourteen of these have been voted on and elected, bringing the active membership up to 76, while the honorary membership numbers 5. Our society is now larger than at any time in its history. This year we are honored in that one of our members, Dr. E. L. B. Godfrey, is President of the State Society. The same gentlemen is Secretary of the Board of Examiners for this State, which fact reflects creditably on the kind of talent we are developing, while at the same time the social eature of our meetings is encouraged and always much enjoyed.

EXTRACTS FROM PRESIDENT'S ADDRESS.

JOHN G. DORAN, A.B., M.D.

Fellow-Members of the Camden District Medical Society:

In an essay on Gœthe's "Faust," by one of America's eminent scholars, we may find the following language: "But alas! the tree of knowledge, always one of good or evil, according to the spirit of the one that gathers its fruits, has yielded him only vexation and disappointment."

These words are spoken to us of Faust as he is presented to us in the opening scene of the great poem. He has "drunk deep at the Perian spring," but finds himself still parched with intellectual thirst. Like Icarus he has flown toward the sun only to find his wings fail him at the time of greatest need. The past reproaches him with its lost opportunities, the present reveals to him his weakness, and the future furnishes no hope of success.

From this aspect of Faust we may educe a most important truth, namely, the fruits of knowledge are good or evil according to the spirit with which they are gathered.

To-day let us gather of the fruit of the tree of knowledge and study its relation to man.

Man in his entirety is divided into three parts—body, mind and soul.

To the church, with its magnificent temples, eloquent clergy and almost unlimited wealth, is ascribed the care and development of the soul.

The State, with its schools, its colleges, its universities, has taken control of the training of the mind.

While to us, as physicians, has been given the body. What are we doing? What can we do?

Let us gather of the tree of knowledge three fruits:

First—Dirt breeds disease.

Second—Pure air is essential to development.

Third—Weakness is hereditary.

In speaking of the first fruit, President Doran said that all the dangers to the public health arose from dirt. That dirt, when not actually the originating cause, was the hot-bed, the forcing house of disease.

In presenting the second fruit, the speaker said what a man becomes depends upon the air which he breathes. Some air is debilitat-

ing. Some air is invigorating, full of ozone, stimulating, reviving. To breathe it is to get a new lease of life. It sends richness into the blood, elasticity into muscles, electricity into the nerves.

It was the outdoor, open-air life that made Babylonians, Persians, Greeks and Romans rulers at different times of the world, and it was the neglect of it which caused each of these empires to fall.

It was outdoor, open-air life that gave the Greeks the Germans and the English the power to impress upon the world the greatest mental impressions. And it was no doubt essential to Christ's success in his three years of ministry that the previous thirty years were spent in an active, outdoor carpenter's life.

Upon the third fruit President Doran, after speaking of several inherited weaknesses, said of insanity that in its diverse phases it is without doubt the saddest, the gravest, the most degrading and far-reaching in its consequences.

From the tree of knowledge we have gathered and examined several fruits. What shall we do with them? Shall we as physicians, knowing that dirt breeds disease; that foul air is debilitating; that weakness in hereditary, remain inactive? Shall we, like Faust, use them for our own selfish ends? Shall we continue the ancient and traditional system of waiting until diseases are well developed, and then fight them as best we may? Shall it be our duty to pull out with spasmodic effort the mangled wretches who float down to the sea of death in the torrent of disease and misery? Or shall we strive to build firmly and maintain steadily the dykes which protect from the sources of disease and death?

We, as physicians, are given the God-like power of choice, but with it a fixed law of consequences. Whenever we gather selfishly of the tree of knowledge; whenever, through prejudice, we investigate and teach a truth in part and refuse to consider it as a whole; whenever, inflamed by passion, we pervert and falsify fact and law; whenever, in fine, we seize the fruit of the tree with the aphorism in our mouth or heart, "Knowledge is power no matter whether for good or evil"—disappointment and sorrow are the unfailing results, both to ourselves and to society.

The ultimate goal of human existence is human betterment, not to the individual, but to the race. To secure this betterment man must know the laws and relations which produce and control it and to them conform his actions.

That evils will accompany this increase of knowledge I do not and have not denied. But limit knowledge to escape the evils which it brings! As well put out the sun's light that we may not see its spots. As well oppose the begetting of children because some monsters are born. As well annihilate the wind because some ships are lost, or the rain because some streams overflow and devastate.

If from some island-dotted bay the flowing tides were suddenly drained away we should discover that all the islands which now lift their several summits above the surface are united below. Divided and separated above, below they possess an indivisible unity.

The fruits which we have this day gathered from the tree of knowledge singly and alone become united when rightly applied to man.

Let man keep himself free from dirt then disease will not sap and destroy the health given him by his ancestors. Let him live in the sun-lighted air, and to his ancestral-given health will be added greater health; and, thirdly, the offspring of his union with a healthy mate will be stronger and healthier than what he was at birth. Thus the individual will become healthier, the progress of the nation will be greater, and the human race will more quickly approach that destiny to which it is slowly but ever trending.

In this way use these fruits, and soon we will place man's body on the same high plane as that occupied by his mind, by his soul, and as physicians we will be lifted out of that deep abyss into which we have allowed ourselves to sink and take our proper place alongside the teacher of the mind, the minister of the soul, as the developer of the body, the physician.

CAPE MAY COUNTY.

To the Chairman of the Standing Committee:

The regular meetings of the Cape May County Medical Society have been held throughout the past year, nothing of especial interest occurring, no papers read, nor cases reported before the society. There have been so far as I know, no marked epidemics, with the possible exception of tonsillitis in the early spring months. Death has visited us but twice in the past year, removing from our midst Dr. Walter L. Leaming, of Cape May City, and Dr. I. M. Downs of Cape May Court House. The obituary of each you will receive at another time, a committee having been appointed for that purpose.

D. KING WEBSTER, *Reporter.*

SO. SEAVILLE, N. J.

CUMBERLAND COUNTY.

To the Chairman of the Standing Committee, etc:

At the July meeting, Dr. T. G. Davis gave an interesting report of the transactions of the State Medical Society, which was held in Atlantic City.

Dr. S. M. Wilson reported progress in "therapeutics," giving many valuable points along that line.

Dr. H. C. Miller reported a case of a boy nine years old with a peculiar skin affection, with rather a remarkable history, resembling more than any other disease, pemphigus contagiosus.

At the October meeting, Dr. H. W. Elmer reported progress in "The Practice of Medicine," noting a number of advances during the past year, emphasis being placed upon the modern management and treatment of pneumonia and tuberculosis.

Dr. G. E. Day regarded alkaloidal medication as a method of certainty, having practiced that method in part, as long as he had practiced medicine.

Dr. G. E. Day reported a man 80 years of age with an immense and extensive carbuncle, also the good effects of bovonine as a remedy, the patient dying finally from cystitis.

The following resolution was passed:

"*Resolved*, That we, the Cumberland District Medical Society, express our willingness to co-operate with Gloucester and Salem County societies in the formation of a Tri-County Medical Society." Amended, "To empower the president to appoint a committee of three if deemed advisable, prior to the next meeting, to confer with the other societies."

The following committee was appointed:—Drs. H. W. Elmer, of Bridgeton, C. W. Wilson, of Vineland, and W. L. Newell, of Millville.

At the January meeting, Dr. Joseph T. D. Howard reported a death from strychnia, granules having been left within reach of a child who ate several of them.

At the April meeting, Dr. H. G. Miller reported progress in "Diseases of Children."

Dr. Geo. E. Reading, of Woodbury, addressed the Society on the subject of the Tri-County Medical Society.

Dr. W. F. Sprenkel, of Philadelphia, addressed the society on

"Prolongation of Pregnancy, its Dangers and Treatment," and Dr. Wilmer Krusen, of Philadelphia, gave an address on "Gynecology in General Practice."

There has been one death. Dr. Joseph Sheppard, who for a number of years was treasurer of the society.

Four applicants were elected to active membership during the year, Drs. F. P. Wainwright, C. B. Neal, Ernest Hummell, and Ferdinand Jones.

H. P. GLENDON, *Reporter.*

ESSEX COUNTY.

To the Chairman of the Standing Committee:

It is my duty, as well as pleasure, to again present my report for Essex County. The annual meeting was held at its regular time with a large and enthusiastic attendance, more so than in several years past.

A large increase was made in its membership, there being twenty new members added to our list.

The president, Dr. J. T. Wrightson, read his report, the title of which was "Treatment of Disease and its Prevention as Evidenced by the Attitude of the People of Essex County."

In this paper a splendid resume was presented of the work of the Medical Institution of the county, and it did credit to its author, by his very able and scholarly essay.

A move was made at this meeting for extra meetings to be held during the year, for the discussion of the medical experiences of the members, in fact, we have begun to realize that a vast amount of material and experience has been lost by our neglect, and it would be to the advantage of our art, as well as to us personally, to meet more often than heretofore. It is hoped that this plan will be carried out in the near future.

There was also offered a plan in conjunction with the Public Library, for the commencement of a medical library—certainly a very desirable thing for the largest city in the State—but how far our expectations are to be realized time will only tell.

It is with regrets that I have to report that death has repeatedly visited our society, removing from our number the gray-haired and the youth.

Dr. Arthur Ward, Frederick William Thum, Henry Melville Smith, and Robert Morris Sutphen. Appropriate obituary notices are presented.

The Newark City Hospital has added to its staff Dr. Charles E. Teeter, as pathologist, and it is hoped that the vast amount of material, heretofore lost, will be ulitized for the advancement of the reputation of this worthy institution.

Our private medical clubs are active, and in their several ways, keeping the flame burning, but I think it were better that we should combine in an unbroken, united profession, with but one interest, the advance of medicine and the improvement in its personnel.

Our friends in Orange of the William Pierson Medical Library Association, have had a prosperous year, and have generously invited the profession generally to the feast of good things which they have provided.

The following well known physicians were the essayists during the year:

Prof. M. Allen Starr—"Arterio Sclerosis and its Effects upon the Nervous System."

Prof. N. Stilman Thompson—"Auto-Intoxication."

Prof. John B. Roberts—"The Pathology and Treatment of Surgical Septicæmia."

Prof. Walter B. James—"Modern Aspects of Malarial Infection."

Dr. J. Edward Stubbert—"An Historical Sketch of some so-called Consumptive Cures."

We wish them success and commend them for their good work.

Dr. Richard Cole Newton has kindly sent me reprints of his papers published in the *Medical Record*, the titles of which are, "Why is Modern School Life so Often Disastrous to the Scholars, Especially Girls," and "The Doctor and the School Teacher, Can They Not Work More in Harmony." Both subjects are timely and of great interest, and are handled as by a master.

The same author discussed the subject, "The Hospital's Need of a Dental Staff," in a reprint from the *International Dental Journal*, and greatly strengthened the subject by his very able suggestions.

I only mention to condemn the newspaper reports of the Tubercular Serum treatment in our City Hospital. While willing to admit the possibility of its doing good, consider it unethical and premature to offer the immature results of a few experiments as facts, and consider that the meagre results shown, do not merit the theatrical display to which we have been treated.

We are at last, after two years of smallpox, free from this unnecessary

curse, the disgrace to our day and time, and we sincerely hope that we will never again have to contend with it in our midst.

In closing, I must again call attention to the fact that I have received, with but the one exception noted, no reports of interesting cases or items of interest from the members of this Society, so will have to offer the few gleanings from the corners of a vast harvest field here presented.

WILLIAM S. DISBROW, *Reporter.*

GLOUCESTER COUNTY.

To the Chairman of the Standing Committee:

The Gloucester County Medical Society has held five meetings during the past year, with an average attendance of twenty-two members, who, with the visiting members and delegates from adjoining counties, make the attendance about thirty-five.

Following the custom of the past few years, the September meeting was given over to the annual banquet, which was held at Evergreen Hall, Woodbury, and, as usual, was a great success.

I am pleased to report the flourishing condition of our society as manifested by the interest taken in matters of national importance as well as those confined within the limits of our own county.

At our May meeting Dr. Halsey addressed the society upon the importance of all members looking after the medical legislation proposed each year. Only by concerted effort can pernicious legislation be prevented and proper laws be enacted.

The attention of our Board of Censors has, on two occasions, been called to note the fact that parties were practicing medicine illegally, and the Secretary was instructed to correspond with the Secretary of the State Board of Medical Examiners, with a view to putting a stop to such practice.

No epidemics of any note have been reported during the past year. A few cases of smallpox have occurred, but the disease has been confined to sparsely settled neighborhoods, and were put under strict quarantine. The last two or three cases were at once sent to the new isolation hospital, which has recently been built in connection with the Gloucester County Almshouse.

At each of our quarterly meetings, papers of much interest are read, both by members of the society and prominent teachers from the medical centers.

There have been two resignations during the past year, those of Drs. H. C. Clark and C. M. Bert, both of whom were elected honorary members.

There have been no new members to join our ranks, neither have we lost any by death, so our number remains the same as last year.

W. GRANT SIMMONS, *Reporter*,

SWEDESBORO, N. J.

HUNTERDON COUNTY.

To the Chairman of the Standing Committee, etc.:

An exact idea of the comparative interest and strength of the Hunterdon County Medical Society may be gained from a statement made by our Secretary, Dr. O. H. Sproul, to the effect that there are now enrolled upon our membership list more active members than there ever have been since the organization of the society. This condition has been voiced at our recent meetings by an attendance which speaks in no uncertain way. It is particularly gratifying to see the young men who are rapidly invading this county not only applying immediately for admission, but also being willing and glad to assume such responsibilities as the society may deem proper to bestow. We feel justified, therefore, in hoping that there has come in the cycle of this society's life a period of ascendency, and in flaunting our success banners without apology.

Directing our attention now to the consideration of this county from a medical standpoint, we are, indeed, pleased to record that there has been no epidemic of any importance during the past year. Measles and mumps have, in some parts of the county, had a fair number of cases to their credits, and diphtheria, in and about Flemington, has been the cause of the closing of the schools in that town. I am informed that the cases were, for the most part, of a mild type. In this connection it may be of interest to note that there is an element of discord in the profession at large as to the value of the laboratory diagnosis of diphtheria; in fact, there are some physicians who classify their cases as either "clinical diphtheria" or "laboratory diphtheria," using the latter term ironically. Frequently we hear of

quarantine being instituted because the card has come back marked "positive" in cases where the specimen has been sent because there happened to be some cases of dipththeria within a few miles of the sore throat under treatment. It would appear that in such cases there is an excellent opportunity for the exercise of common sense and such judgment as will protect the community and at the same time not interfere unnecessarily with the normal functions of society at large. The two diseases conspicuously small in number of cases during the past year are typhoid fever and pneumonia. Isolated cases of each of these diseases have occurred throughout the county, but there has been neither epidemic of the one nor many cases of the other. Smallpox has not appeared in this county during the past year. We may well credit this to the general vaccination which was practiced one year ago, and which was made possible by the praiseworthy efforts of our boards of health. There is a number of cases now in the hands of physicians for the treatment of conditions which are presumed to be the results of the inoculation with vaccine. With the exception of these few questionable cases there have been few uncomfortable results from the widespread vaccination which was carried out. One class of cases particularly singled out by the anti-vaccinationists is that of lymph-adenitis. Certainly these cases are not rare at the present time; in fact, they are seldom rarities. Personally, I am of the opinion that these cases, of which I have seen a few during the past year, are entirely independent of vaccination, so far as their etiology is concerned.

Returning to the condition of the society itself, there is a healthy spirit of discussion growing which has already been productive of good, it being a common thing for men to report interesting or difficult cases and invite criticism or ask advice. Altogether the meetings are of a highly practical character, and, indeed, are a privilege and not a duty.

It is fitting that mention be made of the excellent services rendered by the retiring Reporter, Dr. George N. Best. Through a number of years he has faithfully served the society in performing this important function in a very creditable manner, and it is a question if there will be found one who will fill the place half so well as he has done.

It is a pleasure to report that there have been no deaths in the society during the past year.

LEON T. SALMON, *Reporter.*

MERCER COUNTY.

To the Chairman of the Standing Committee, etc.:

The Mercer County Society has another successful, entertaining and instructive year's report to make. The papers read and addresses and reports of cases presented have been characterized by thoughtfulness and thoroughness in preparation, and the ensuing discussions have been of much value. During the year we have added ten new members and lost three—two by removal and one by death—a net gain of seven.

At our annual dinner held November 11, 1902, Dr. Barton Cooke Hirst, of the University of Pennsylvania, was the guest of honor. He delivered a very exhaustive and instructive address on "The Necessity of a More Careful Examination and Treatment of the Patient During Puerperium," which was afterward discussed freely.

At the June meeting Dr. C. F. Adams read a paper on "The Need of a New Public Library in the City," in which the needs of such an institution were well set forth.

Again, at the October meeting, the same gentleman read a paper on "Glaucoma." Quoting from Von Graefe, he said: "The essence of glaucoma lies in the increase in the intra-ocular pressure, from which all other essential symptoms of glaucoma can be deduced." In primary glaucoma the condition arises without any discovered antecedent cause, the primary important essential symptom being the increased tension. In the secondary form the increased tension is a sequence or accessory of some other pathological condition, and its clinical picture is as varied as the conditions from which it arises. It remains confined to the diseased eye, while the primary form affects both eyes. The consequences of the increased tension are excavation of the optic nerve and ultimate annihilation of sight.

Dr. F. V. Cantwell reported a case of gall-stones, with specimen; also a case of ectopic pregnancy, with specimen.

Dr. Cornelius Shepherd reported a case of convulsions following confinement.

Drs. G. H. Franklin and F. V. Cantwell, at the January meeting, reported an "Unusual Case of Uterine Fibroid."

Dr. Franklin presented the history of the case to time of operation, as follows:

Mrs. S., aged 49; white; large, masculine woman, usually in good

health; married; one child; miscarried at third month in October, 1893. During 1899 and 1900 menstruation often absent two or three months; flow was never profuse. There was slight pelvic pain, nervousness and emaciation. Patient refused examination. In March, 1901, peculiar contour of the abdomen was noted, and a tumor about the size of a man's head easily mapped out. Vaginal examination showed entire body of uterus involved, but patient refused consultation and operation. In May, 1901, foul vaginal discharge commenced, and Dr. Cantwell was called and confirmed diagnosis of uterine fibroid, and on May 20th operation performed by Dr. Cantwell, who removed a large fibroid uterus. During the convalescence the respirations ranged from 25 to 40. On the forty-ninth day after the operation, from which patient had entirely recovered except for rapid breathing, the dyspnœa suddenly increased, patient unable to lie down, pulse 140 and very weak. The symptoms indicating pleural effusion, paracentesis was done, and eight ounces of bloody serum withdrawn. Respirations were now 50 to 60, pulse 160. These symptoms continued with remissions until sixty-first day after primary operation, when death occurred during severe struggle for breath. The lungs at autopsy revealed presence of great numbers of small tumors, in size from that of a marble to a walnut, scarcely attached to the lung, and almost dropping out when exposed. The important feature of this case was the wide metastasis and profuse recurrence. This may have resulted from portions of the tumor entering the larger veins and being carried to the lungs. It is almost certain that metastasis had occurred before operation. The mode of death was peculiar in that it was due to mechanical destruction of lung tissue and not to malignant character of growth. Microscopical examination showed tumor to be a round-cell fibro-sarcoma.

Dr. G. N. J. Sommer reported an interesting case of brain tumor, the symptoms of which were vomiting, pain in right anterior half of head, and slight internal squint with dilated pupil; finally partial loss of power in left side and total blindness. The diagnosis was tumor involving the right frontal lobe and pressing on hand and arm segments of right motor area. The tumor was a dark red mass, firmer than brain tissue, with a necrotic centre from which flowed a gritty semi-fluid material. The cavity left after removal was about 5 c. m. by 2 c. m., and bled freely, but hemorrhage was controlled by packing. The child died in convulsions on nineteenth day after operation.

Dr. Charles L. Allen, of the State Hospital, at the February meeting, presented specimens and histories of cases, with remarks on the same, of—

1. Rare tumor of the brain.
2. Tumor of the spinal cord.
3. Perforation of intestine.
4. Cancer of colon and liver.
5. Brain from general paretic.
6. Specimen illustrating diagnosis of rabies.

Also for diagnosis, a patient with mycosis of fingernails.

This proved to be one of the most enjoyable and instructive meetings of the year.

Dr. H. B. Costill, at the March meeting, read a paper on the "Immediate Repair of Perineal Lacerations." He said the lacerations might often be avoided by aiding expulsion of head between pains, and if lacerations did occur, they should be repaired within twelve hours if possible.

Dr. A. J. Hunt read an exhaustive paper on "Endometritis" at the May meeting.

In response to a letter from Dr. L. M. Halsey, chairman of the Committee on Legislation, the following answers were sent:

No definite action has been taken by the society to suppress the illegal practice of medicine.

That all persons practicing any or all branches of medicine should be required to pass the State Board of Medical Examiners and be registered the same as any regular practicing physician.

Fee for examining indigent insane patients, $10.00.

Fee for post-mortem ordered by coroner, $25.00.

Fee for testifying at inquests, $10.00.

The Trenton Medical Library is in a very flourishing condition, 200 volumes having been added during the year, making a total of 700 volumes, which with the twelve journals regularly received, are frequently and profitably consulted by the members of the association. During the year the association has heard addresses from Dr. George Gould, of Philadelphia, on "Medical Discoveries by the Non-Medical," and since published in the May 30th number of the *Journal of the American Medical Association*; "Reminiscences of Dr. Charles Skelton, the Founder of the Trenton Free Public Library," by Dr. Cornelius Shepherd and Mr. John Briest; by Dr. William Osler, of

Johns Hopkins University, on "The Uses of a Medical Library, and by Professor Abbot, of the University of Pennsylvania, on "Filtration."

The officers of the Library Association are Dr. F. V. Cantwell, President; Dr. H. G. Norton, Vice-President; Dr. J. Cooper, Treasurer.

While the health of the city has not been bad, the showing is not so good as for the preceding year, as the following will show:

Diseases Reported.	From May, 1901, to June 1, 1902.	From May 1, 1902, to June 1, 1903.
Diphtheria	33	109
Typhoid Fever	90	282
Scarlet Fever	36	91
Smallpox	35	13
Tuberculosis	34	33

During the year we have lost by death one of our most active and valued members, Dr. Wm. M. D. Struble, which occurred on August 28, 1902.

The hospitals have done more work this year than ever before. Mercer Hospital has been enlarged, and now has a capacity of 100 beds. St. Francis Hospital is also having a $60,000.00 addition built, and when this is finished a training school for nurses will be established.

MIDDLESEX COUNTY.

To the Chairman of the Standing Committee:

During the past year the Middlesex County Medical Society has held its regular quarterly meetings, which were well attended and have aroused considerable interest in the work of the Society. While our numbers have been increased by the addition of new members, we have suffered a severe loss by the death of Dr. Nicholas Williamson on August 15th, 1902, of typhoid fever, after a three weeks illness.

During the past winter, we in New Brunswick have had many more than the usual number of cases of diphtheria. There have been reported 254 cases of diphtheria, with nine deaths, a very creditable showing.

We also had reported twenty-three cases of smallpox, all but two

of which were among the colored population. The almost complete confinement of the disease to such an unmanageable class of people, speaks well for the efficient work done by our local board of health.

We had reported, nine cases of typhoid fever, with one death, that of Dr. Williamson as above noted.

H. L. SMITH, *Reporter.*

MORRIS COUNTY.

To the Chairman of the Standing Committee:

Papers upon the following subjects have been read before the Society during the last year. Each paper was good and the discussion following lively and interesting.

"Common Injuries and Diseases of the Eye," by Dr. L. L. Mial.

"Hæmaturia," by Dr. H. A. Henriques.

"Electricity in Gyneology," by Dr. N. H. Adsit.

"Disturbances of the Circulation," by Dr. W. S. Foster.

"The Anæsthetist," by Dr. J. W. Farrow.

"General Paralysis of the Insane," by Dr. P. S. Mallon.

A number of interesting cases have been reported at almost every meeting.

No general epidemics have prevailed in the county during the past year. A few cases of smallpox have occurred and a few typhoids.

No members have died during the past year.

Our Society has made very gratifying advancement all along the line. Its membership has increased to 60. The number of meetings has increased from two to four. The interest in the papers read and cases reported, and the activity and pertinence of the discussions following, show that the society is doing a good work for its members.

Respectfully submitted,

STEPHEN PIERSON, M.D., *Reporter.*

SALEM COUNTY.

To the Chairman of the Standing Committee:

The Salem County Medical Society has held three meetings during the past year. These meetings have been well attended and considerable interest manifested.

Dr. Daniel Strock, of Camden, attended two of these meetings and gave us very interesting talks on surgical subjects.

At our last meeting, Dr. E. E. De Groft, of Woodstown, read a paper on "The Vicissitudes of a Doctor's Life." A copy of which I enclose.

The Society has gained two new members during the past year, and I am happy to say has lost none through death.

The health of the community has been comparatively good. During the months of February and March, la grippe appeared in a mild form. Parotitis has been quite prevalent and of a severe form among adults, but with the children it has been mild. Typhoid fever has been almost unknown, and there have been comparatively few cases of pneumonia.

W. H. CARPENTER, *Reporter.*

THE VICISSITUDES OF A DOCTOR'S LIFE.

BY E. E. DE GROFT, M.D., WOODSTOWN.

Although I deem it an honor to be the essayist for this meeting, yet it was with a degree of reluctancy that I consented to accept the invitation, as I am a much better listener than a speaker. However, even though the effort may prove to be a humble one, I shall fulfill my promise to you; angels could do no more.

I have selected for my theme something that is out of the usual order. Instead of treating upon some medical subject, I have decided to speak in a general way upon the vicissitudes of doctors' lives.

Is it possible to conceive of a more noble and humane calling than that of the medical profession?

Think for a moment of the overworked physician, more especially in a country practice in his visitations to the sick, ministering to their ills and ailments upon every hand, very often sacrificing his life by so doing, responding to midnight calls, matters not how inclement the weather, knowing very often when he is called that he will not receive any compensation whatever for services rendered other than perhaps words of praise only while alleviating the sufferings of the patient, and words of condemnation after recovery if a bill is rendered, which reminds me of the following verse that I once read which I think is a typical case of ingratitude.

"God and the doctor we both adore
When in sickness, but not before;
When the suffering is o'er they are both requited,
God is forgotten and the doctor slighted."

That undoubtedly has occurred in the practice of every gentlemen present.

There are no men in any profession, that are more philanthropic, more self-sacrificing, and more earnest in their untiring efforts to relieve suffering humanity, and to do good generally in the community in which they live, than physicians.

Because of the great mission that we have started out upon after bidding farewell to our almamater, and the grand work that we are engaged in daily among our fellow-men, we are led to believe that the medical fraternity ranks second to none among the professions of the day, and yet we are more poorly remunerated than any other. The lawyer for instance receives a cash fee of $5.00 for an office consultation, while the doctor's fee for knowledge that often is very much more important is usually fifty cents, and he is fortunate who always gets it in cash.

But he who enters the profession solely and only for the emoluments received, does not in my mind constitute a true physician. Our mission is not only to aid nature in healing the sick and alleviating the sufferings of those who are in need of our assistance, for the monetary return that we expect, but our sympathy should go out to those who are in distress, and words of cheer and comfort should accompany the prescription also.

Sick people as a rule are easily influenced, and doubtless it has been the experience of some of us, that if the patient's condition should suddenly become alarming, a change in physicians may be made, perhaps without even consulting us. Instead of becoming indignant and giving vent to our pent up feelings at such treatment, it is far better that we pleasantly submit to their whims and graciously bow to the inevitable, and by greeting the family as pleasantly afterward as before, and letting the occurrence pass by unnoticed, the probabilities are that in the event of another member of the family being taken ill you will be recalled. Such at least has been my experience.

Professional courtesy and kindly greeting to our fellow practitioners of whatever system, should be commended if they are honorably disposed, otherwise they should be discountenanced.

As physicians, and as a society, let us uphold our profession and prove ourselves to be in the eyes of the public, all that we should be, and at all times discourage any pretension or tendency whatever to

chartalism, quackery or petty jealousy. Life is too short to take the advice of David Harum to "Do unto the other fellow as he would do unto you, but do it first," which it is needless to say is not the golden rule. But let us grant to others, regardless of school or system, what we claim for ourselves, the right to legitimately practice our profession with the view that each one stands or falls upon his own merits.

Honorable competition is permissable in all lines of business, but any demonstration of ill feeling toward our opponents is to be condemned, even though such a course may appear to us to be perfectly justifiable, yet the laity will not take the same view of the case as we do, and invariably will conclude that our action was prompted by a jealous motive. A case in point. Many unkind and unprofessional remarks made by an older practioner about a younger physician just beginning life, resulted in the upbuilding and advertising of the one that was persecuted, and redounding to the discredit of the persecutor. And the younger man who was the target of the ungentlemanly epithets indulged in by the older one, held his own council, kept on in the even tenor of his way, and followed the advice of an old farmer, "that the still hog got the swill," and in a short time he became the happy possessor of a lucrative practice. I have found that the successful physician in a community is he who is a close observer of human nature, a cautious and careful diagnostician, a diplomat to a certain extent, and who in a pleasant and cheerful manner will accommodate himself to circumstances as they confront him.

No one can afford to practice medicine for glory alone, so a fair compensation for services rendered is also an important factor in a successful practice, and the standard of our profession should be maintained in that particular, and an established fee system inaugurated and adhered to at all hazards, in order to protect ourselves as a fraternal society.

Speaking of protection, do we as members of the medical profession live up to and practice the friendship toward each other that we should? And is there the professional etiquette manifested among medical men practicing in the same community that there should be? I am afraid gentlemen, that there is vast room for improvement, and what is needed as much as anything else in our noble calling, is more charity for each other. Let us then refrain from indulging in petty jealousies, rivalries, and personalities. If one physician should

perchance become more fortunate than his brother in his professional attainments and skill, he should be congratulated and encouraged to continue in his investigations that the profession generally might be benefited thereby.

Neither is it tact or good policy to speak unkindly to our patients of those of the opposite school if they are pursuing a legitimate practice and have conformed to the requirements of the laws of our State, they have equal rights with others and should be accorded the same privileges.

What a mixture a doctor's life is. It is certainly not always one of ecstatic joy. He is supposed to be at all hours at his post of duty, ready to respond to the beck and call of the public; no regular time for rest or recreation, and in the event of an unavoidable death occurring in our practice, we are subjects of adverse criticism. Yet I fully believe that the rank and file in every community appreciates an honest, conscientious and matter of fact doctor. So, regardless of the opinion of the world, I trust that we will be true to our fellowman, true to our God, and true to ourselves.

William Cullen Bryant once said:

Truth crushed to earth shall rise again—
The eternal years of God are here—
But Error wounded writhes with pain,
And dies among his worshipers.

There is no class of men whose actions and deportment are more carefully watched and commented upon by the public than physicians. Shall we not then be like Cæsar's wife, not only virtuous, but above suspicion?

I have never forgotten the timely admonition given to the class when a student by the late Prof. Ellerslie Wallace, and that was, "always insist upon having a third party present when making a vaginal examination, by so doing," he stated, "you will always escape slander and blackmail"; and so, throughout my entire professional life I have followed his advice and have jealously guarded my reputation in that particular as well.

Young girls, and married women as well, have come to my office pleading with tears asking for some emmenagogue; the young women with a plea to prevent disgrace and save her character, and the married women with a pretext that they already have more children than they can support.

In every case, and I have had quite a number of them, I invariably point out to them not only the great danger of the proceedure but also the criminality of it as well.

If they still insist that I must render them assistance and refuse to listen to reason, I then at once meet their earnest entreaties in a language that is unmistakable, and promptly refuse to entertain any proposition whatever, firmly believing that it always pays to follow the dictates of your conscience and never is safe to do wrong.

I knew of a brilliant physician whose prospects in life were unusually bright, but who, at the earnest solicitation of his patient, performed an operation that was both illegitimate and criminal, and in consequence spent years behind prison bars.

In my opinion there is no better safeguard or shield to the medical profession, individually or collectively, than to become identified with a good medical society. Such an organization not only affords protection, but gives prominence to its members as well. And apart from the intellectual feast that we are sometimes treated to at our society sessions, by the reading and discussion of various papers of interest, the social features of these gatherings are of great importance.

The pleasant greetings and hearty handshakes extended by its members more than repays one for the sacrifice he makes in leaving home and practice to be present at our society meeting.

Exaggerated statements made by physicians of wonderful cures effected and operations performed should be guarded against, especially when such statements have no semblance of truth whatever, even though they are credited by the laity or uninformed. Evidently the motive for doing so is purely for personal advertisement, which, undoubtedly, was the case of a physician who is not, I am pleased to say, a member of this society, who at one time said that he performed an operation for Cæsarian section unaided and alone on a patient, and the remarkable part of the story is, that it was so successful that mother and child both lived. Comment is unnecessary.

To be able to discern the likes and dislikes of our patients, to be careful and thorough in our diagnosis of diseases, and to keep abreast of the times by reading something more than the daily newspapers, goes farther towards making up the component parts of a successful physician than fluency of speech or the facility of expression.

Common sense is also, I think, one of the essentials of a successful

professional life, and in a measure should supersede too much theory. A certain portion of theory, however, may be proper, but practical experience and foresight tinctured with mother wit judiciously applied in my opinion brings better results.

In making professional calls experience has taught me that a certain amount of tact and judgment should be employed. While some would perhaps think it proper and in order to enter their homes uncerimoniously, others would deem it rude and a violation of etiquette to do other than to announce yourself by a ring of the door bell and out of order to be anything else than dignified. Hence the importance of discrimination, which applies equally as well to our visits to the poor as to the rich.

In speaking of the poor, physicians render more unpaid services than any other class of people in the world. The poor, said a renowned physician once, are my best patients. God will be their paymaster. But even in doing charity we should discriminate. There seem to be two classes of the poor—the Lord's poor and the devil's poor. I have found that the less we have to do with the latter and the less strength and health we expend on them the better it will be as a rule for us. They are in many instances the lowest and meanest victims of vice, intemperance and sensual indulgence. It matters not what attention may be given such cases, they are usually ungrateful, and I cannot contemplate a greater sin than ingratitude for services rendered when no remuneration is received, especially when we must face contagion and inhale noxious gases or vapors, encounter the filthiest kind of filth, and perform many distasteful and disgusting duties. As servants of the public, we must endure August suns and the blasts of winter months. We are supposed to respond to the calls of Tom, Dick and Harry, whether it is at noon or the midnight hour. While others are resting or refreshed with sleep we must go.

A physician is in continual danger, and when, like a wild tornado, the swift, gaunt, ghastly, withering epidemic begins its work of death, no matter how great the hazard, he must from a sense of duty take his life in his own hands, as a brother physician has recently done at Clayton, New Jersey, in an epidemic of diphtheria. This physician, by devotion to duty and nobly standing at his post, has contracted the disease in its worst form, and is, I think, at the present time under quarantine.

Some one has divided man's life into four periods, and called the

first twenty years the period of preparation, from twenty to forty the period of struggle, from forty to sixty the period of victory, and after sixty rest. Not so with the physician; his struggles lasts till life ends.

Dr. Jarvis estimates the average length of life of a physician at fifty-six years. If you begin practice at the age of twenty-four, your active life prospect will be 32 years, and from a thousand to fifteen hundred dollars will represent your average yearly income. From the day of leaving college, through all the phases of our professional life down to old age, with not even a Sunday to rest or to call your own, you would have but little after all expenses are met to support you after you naturally reach the down hill of life or are broken in health and in need of a physician yourself, through worry, anxiety and fatigue in the discharge of duty, and by such faithfulness Heaven knows that we deserve better treatment and more comfortable support than we ofttimes receive.

The subject being a broad one, much more could be said if time would permit and you had the patience to listen, but I will desist, and in conclusion let me exhort you, as did the apostle his disciples: "Giving all diligence, add to your faith virtue, and to virtue knowledge, and to knowledge temperance, and to temperance patience, and to patience godliness, and to godliness brotherly kindness, and to brotherly kindness charity."

SOMERSET COUNTY.

To the Chairman of the Standing Committee:

The meetings of the Somerset County District Medical Society have been unusually well attended. At the annual meeting held in April, the following officers of the society were elected: President, Dr. C. R. P. Fisher, of Bound Brook; Vice-President, J. P. Hecht, of Somerville; Secretary, J. H. Buchanan, of North Plainfield; Treasurer, T. H. Flynn, of Somerville; Reporter, W. H. Long, of Somerville; Delegates to the State Medical Society, Drs. J. H. Buchanan, North Plainfield; T. H. Flynn, Somerville; M. C. Smalley, Gladstone.

After the routine business of the society had been transacted, Prof. H. Augustus Wilson, of Jefferson Medical College, Philadelphia, read a very interesting paper on "The Advantage to be Derived from the Early Diagnosis of Tubercular Joint Diseases." This was followed by a discussion in which all the members of the society took part. Short addresses were also made by Dr. John Ward, of the Trenton State Insane Hospital; Dr. A. Treganowan, of South

Amboy, and Dr. O. H. Sproul, of Flemington. Following these, the society and its guests partook of the annual dinner, which event was enjoyed by all.

At the regular quarterly meeting, held in July, a paper on "Diphtheria" was read by Dr. J. H. Buchanan, of North Plainfield, and informal discussions of various medical and surgical topics by all took place.

At a special meeting held on March 14th, a committee was appointed to go to Trenton and appear before a Senate committee to oppose Senate Bill No. 282, which proposed to license osteopaths to practice in New Jersey. The committee, consisting of Dr. A. L. Stillwell and Dr. W. H. Long, Jr., went to Trenton and appeared at the hearing. The opposition to the bill was so great that it was not reported by the committee to the Senate at all.

The Somerset County Society has gained two new members during the past year—Dr. F. Hughes, of North Plainfield, and Dr. Funkhouser, of the State Epileptic Colony, at Skillman. There have been no deaths in the society during the past year.

There has been about the average amount of illness during the year. The small number of children suffering from gastro-intestinal disturbances seemed unusual in the summer. There were a few scattered cases of typhoid fever during the autumn months, also the average number of cases of diphtheria and scarlet fever.

During the late fall and winter months we had the greatest number of smallpox cases in many years. In South Bound Brook there were twenty cases, several isolated ones on the mountains north of Somerville, three at Burnt-Mills, and one near Rocky Hill. These cases were all contracted from some one who came from New Brunswick, it is thought. Somerville prepared for an epidemic by building a small isolation hospital, which was not required. All children in the public schools were ordered to be vaccinated at the expense, if necessary, of the local board of health. Nearly all the unvaccinated were vaccinated, and no new cases occurred.

Our local society is in a very flourishing condition. The meetings are all well attended and either a paper read or a discussion held. For the next year it has been arranged that each member, in alphabetical order, shall read a paper.

I am sorry to state that I have received nothing to report from our out-of-town members.

W. H. LONG, M.D., *Reporter.*

SUSSEX COUNTY.

To the Chairman of the Standing Committee:

The members of the Sussex County District Medical Society are in general separated by considerable distance, and it has not been practicable to hold but one meeting a year.

With four exceptions, all regular physicians of the county are members of the society.

The last annual meeting, held May 19th of the present year, was attended by eleven members, about one-half of the membership of the society. Notwithstanding the small attendance the session was an interesting one. Three papers were presented. The President's address on "Appendicitis" was actively discussed. Dr. H. D. Van Gaasbeck's remarks on the subject were listened to the more attentively because of a recent severe case in a member of his own family.

Dr. M. D. Hughes, of Layton, exhibited a pathological specimen of an aneurism of the ascending aorta taken from a recent case of his. The growth was of immense size, the walls having become greatly thickened in the efforts at repair. A neglected thin spot adjoining the pericardium was the site of a small rupture, which was the cause of a sudden fatal termination. The doctor gave an excellent demonstration of the specimen and report of the case.

The next meeting being the seventy-fifth anniversary of the society, there was some talk of fittingly commemorating the event.

There has not been more than the usual amount of sickness in the county the past year. No epidemic disease has prevailed except measles, which at the present time is quite prevalent in the northern and western portions of the county.

I regret it is my duty to have to report for the first time in many years the death of two members of our society—Drs. Carlos Allen and Sidney B. Strahley, both of whom have been active and esteemed members. I enclose brief obituaries.

SHEPARD VOORHEES, M.D., *Reporter.*

UNION COUNTY.

To the Chairman of the Standing Committee, etc.:

The one hundred and twenty-fifth regular meeting of the society was held at Elizabeth, and was well attended, interesting and

instructive. Dr. S. T. Quinn read a worthy paper on "Intestinal Obstruction." Dr. Hedges reported a case of absence of the appendix. At the two succeeding meetings there was no paper, the essayist, one of the older members of the society and a very busy practitioner, was absent. This was discouraging to the President and very disappointing to the members, and it almost seemed as though the life of the society was suffering from shock; however, as it always is, the reports and discussion of cases were beneficial. Dr. E. B. Grier reported a case of absence of the uterus. At the final meeting of the year the Princeton "ninth-inning" activity was manifest. The President, Dr. T. F. Livengood, read an able paper on "Acute Rheumatism." Dr. J. P. Reilly exhibited an appendix in which was embedded an ordinary pin.

The health of the county has been fairly good. A general idea can be obtained from the following reports of the boards of health of Elizabeth and Plainfield, which cover the period from July 1, 1902, to June 22, 1903:

ELIZABETH, N. J.

Diseases.	Cases.	Deaths.
Typhoid Fever	95	21
Scarlet Fever	63	1
Diphtheria	231	9
Measles	13	0
Smallpox	10	4
Whooping-Cough	86	12
Tetanus	2	2
Tuberculosis	69	69

PLAINFIELD, N. J.

Diseases.	Cases.	Deaths.
Typhoid Fever	36	4
Scarlet Fever	36	5
Diphtheria	81	7
Measles	8	0
Chicken Pox	8	0
Smallpox	4	1

Pneumonia was quite prevalent during the winter. Quinine injections were favorably used in the treatment. A number of cases of the intestinal variety of influenza were reported. Elizabeth had an

epidemic of whooping-cough, and typhoid fever has been endemic. There has been an especially large fatality from railroad and trolley accidents.

The fee system is in process of revision. Simply reading it almost makes one feel wealthy.

There was some agitation regarding the prosecution of irregular practitioners, osteopaths, etc. The Prosecutor offered his services. Dr. E. L. B. Godfrey advised the society that it should be very sure of its evidence before bringing suit. Nothing developed.

The Elizabeth General Hospital has been equipped with an X-ray apparatus by the clinical society of the hospital, as a memorial to the late Hon. W. A. M. Mack, M.D. Dr. Charles Schlicther directs the X-ray work. A number of cases of carcinoma are improving under this treatment, with bright prospects of entire cure in time. A case of Hodgkin's disease, with marked involvement of the retro-peritoneal glands, has been much benefited by the treatment, the circumference of the abdomen having decreased several inches. The apparatus is used very frequently for diagnostic purposes. Any member of the County Society has the privilege of the use of the X-ray by paying a moderate fee. This money is used in the expense of running the machine, for new tubes, etc.

No member of the society has died during the year; six new members have been admitted, making a total of 69.

P. DU BOISE BUNTING, *Reporter.*

WARREN COUNTY.

To the Chairman of the Standing Committee, etc.:

In answer to the questions propounded by the Chairman of the Standing Committee, would state as follows:

1. To date I have received no "interesting" nor other "papers read before our society," which met June 3, 1903, in annual session, at Belvidere.

2. Several interesting cases were brought before the society for discussion.

3. The most prevalent diseases in our county have been diphtheria, typhoid fever, scarlet fever and smallpox—the town of Phillipsburg having more than its share. The Health Inspector of this town

reports that, going back to October 1, 1901, and ending October 1, 1902, there were 58 cases of diphtheria, 9 of scarlet fever, 9 of typhoid fever, and 2 cases of smallpox. He does not report the death rate during that time. From October 1, 1902, to June 5, 1903, the Inspector informs me there were 30 cases of diphtheria with 4 deaths, 7 cases of scarlet fever with no deaths, 60 cases of typhoid fever with 6 deaths, and 16 cases of smallpox with no deaths. Smallpox is still lingering in Phillipsburg, but is well quarantined.

4. I am happy to report that our society has lost none of its members by death during the past year.

5. Our society holds its own in membership. I feel satisfied there are more outside than within the fold of the society, and, as a rule, these non-members contend that there is very little beneficial information to be obtained in or as members of the County Medical Society. "'Twas ever thus."

Just here I will mention that the smallpox cases of Phillipsburg are under the care of a contract physician of Easton, Pa., at $10.00 per day, only one of the local physicians looking after his own smallpox cases.

J. H. GRIFFITH, M.D., *Reporter.*

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